

# Editorial Comment

## Limitation order on boxes the lesser of two evils

One of two types of orders in regard to folding and set-up boxes is sure to hit the cosmetic industry before very long. John H. Patterson, consultant, WPB Folding and Set-Up Box Division, has in mind two alternative types of orders for 1944 control; the one a preference rating similar to the P-140 shipping container priority order which would rate end uses on the basis of relative essentiality; the other, a percentage limitation order that would assign specific quotas to end uses.

Of the major uses of paper and paper board, 61 per cent of the total goes into packaging papers and paper-board, the rest is apportioned to newspaper and other uses. Since a large part of this 61 per cent is already earmarked for military and essential civilian uses and cannot be cut, it therefore falls to the lot of the cosmetic industry to stand the brunt of a possible more than 25 per cent cut.

Therefore, a preference order, which would mean that the cosmetic industry could use all the folding and set-up boxes it could lay its hands on—their rating, in most instances B-7, if any at all—would preclude their obtaining but a few left overs, and no one would know where he stood.

On the other hand a limitation order, while probably calling for a more than 25 per cent cut, would give the industry a chance to figure out the possibilities of packaging its goods. It might be borne in mind right here that an increase of from 10 to 25 per cent retail tax is in the offing for cosmetics and if the industry has nothing in which to package its products, what becomes of the increased revenue from this tax.

Under the limitation order the only fair basis is a distribution by poundage. This would mean that simplification of boxes would stretch the number, thus effecting some easement to the industry. The base period should be 1942, but it should be remembered that in the case of dentifrices, a switch was made in 1942 from metal to paper. This of course must be taken into consideration when setting quotas.

This is a very serious matter, probably the most important problem the industry has had to face; it could undermine the foundation of the whole industry causing it to come tumbling down, not only upon itself but upon those who want the neat little sum the cosmetic industry turns into the Treasury coffers.

# the American Perfumer and ESSENTIAL OIL REVIEW

C O S M E T I C S - S O A P S - F L A V O R S

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# desiderata

*Comment on interesting  
new chemical developments  
and their application to  
cosmetics and toiletries.*

by MAISON G. DENAVARRE

## REHEATING CREAMS

Practically every cosmetic factory is suffering from both a labor shortage and a disinterest on the part of many new workers in following out orders exactly. As a result, particularly in medium to small sized factories, a batch of a hundred or more pounds of cream is made too late to be filled the same day. It is allowed to set until the following day when it is reheated for packing. Sometimes direct heat is used. This is bad under any circumstances, but you can get by if you watch the cream *closely* and don't heat too fast. If you are not careful, you will find that creams made with beeswax will pick up a very unpleasant odour, so much so, as to mask the perfume entirely.

If the cream is of the absorption base type, cooling tends to form large droplets of water in the cream if it has not been milled or homogenized, and the resulting cream must be re-emulsified before again homogenizing or milling. If milled and remelted, great care must be exercised or the cream will separate water. This is particularly true of lanolin absorption base type creams, but not so much so with the sorbitol or mannitol oleate type creams, although both types suffer.

Sometimes emulsified creams are melted and remelted several times over a period of weeks. Only a fool would do this, but there are probably a lot of fools doing it. They make one batch of say 500 pounds, remelt the whole thing to fill one hundred pounds. Let it stand, remelt a week or a month later



M. G. DeNavarre at work in his laboratory

and so on until the batch is gone. I can think of only two creams, liquefying water-free cleanser or a self emulsifying glyceryl monostearate cream that can be so handled, and only if the cream is melted in a jacketed kettle. Is it any wonder some creams separate after shipment while others smell as if they were rancid? Then you blame the supplier for having sent faulty materials.

## FILTERING LOTIONS

An inert material is the only safe filtering media—not magnesia or anything else that possesses any free, active or soluble ions such as hydroxide, carbonate or bicarbonate. Such ions react with acid reacting substances. They may be dissolved by the lotion and react with other ingredients producing less soluble substances that slowly precipitate after bottling. Use any well-known filter aid, but *not* magnesia.

## PERMANENT WAVE OIL

Another supplier now offers a clear oil of uniform composition that can be used in permanent waving solutions to render them milky. This source is one of the largest processors of oils and is

thoroughly reliable. Results are uniform from batch to batch.

## SACHET BASE

There is an interesting material that makes a nice sachet base that is freely available. It comes in three mesh sizes, 40, 100 and 200. It is white, odourless and inert. It is vegetable. It will make a deluxe sachet as is or it can be mixed with other ingredients.

## SMALL ORDER EXEMPTION

Some manufacturers who need supplies governed by "M" orders don't realize that most such orders have a small order exemption clause. Thus for triethanolamine it is one drum; for propylene glycol it is two drums and so on. If you can get by with this quantity of material, you need not make a WPB application for it. Check with your local WPB branch or with your supplier, although such "exempt" orders usually must be in the suppliers' hands by a certain date of the month, about 30 days before delivery. So if you plan your production and spread out your material needs, you might be able to save yourself a lot of trouble.

## FLASHBURN CREAM DILEMMA

Not long ago the newspapers throughout the United States were carrying a story about a flashburn cream—something right down the alley of the cosmetic industry. Some papers said it was discovered at Fort Knox by the Army, others said it was at one of the Navy medical centers. Several people asked me about it so I tried to track it down. The Army knew nothing about it. The Naval Purchasing Depot in New York didn't either. Finally, after some investigation it was traced to the National Institute of Health at Bethesda, Md. But the official there wouldn't give the formula. Instead, he suggested that a certain New York manufacturer be contacted, since he was making it. But the manufacturer was keeping his Naval secret well. He wouldn't let it out.

Now there are certain developments that the military authorities keep con-



## Are YOUR Tubes Being Shipped by Ox Cart?



THE leisurely pace at which *some* orders SEEM to move these days is entirely beyond our control. Delays . . . these so-called "ox-cart shipments" . . . usually occur with the non or low rated orders . . . those that have to give right of way to the vital requirements of war.

There are still not enough collapsible tubes available to take care of all government and civilian demands. As the size of our fighting force grows and additional Axis territory is occupied, more and more tubes are constantly required. So . . . bear with us, please! Be assured we're also conscious of *your* urgent needs. Every means at our command will be strained to the utmost to serve you as quickly as possible.

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fidential for the sake of national security. If this was one of them, why let the newspapers get the story in the first place? If it is not a secret, it should be open to anyone who is able to make it on a competitive bid basis, as are so many other things. If it is to be a secret, let's keep our traps shut all the way down the line.

#### PAPER SALVAGE MESS

Of course everyone knows that there is a shortage of help to do anything. Yet certain things must be done or it's the curtains for us. Thus, there are probably thousands of tons of paper that are being burned daily because there is no organized scheme for picking up waste paper. If you 'phone the agency designated to pick it up, you may have to wait until doomsday to get service. Finally, the paper becomes a fire hazard as well as a mess that clutters up your place—and so you burn it. This goes for paper, boxes, excelsior, magazines and newspapers.

The only way to get all the waste paper is to have the municipal authorities pick it up, as they pick up tin cans. Designate a certain day of the month for the paper to be picked up, have the people set it at the curb and get it done in one day. You'd have more paper waste than you would know what to do with. Such a method applies to glass and any other salvage item. That is the way it is done in Canada and in England. Why can't we learn from them? Why must be labor along the hard way? Why must we wait for a church or the Boy Scouts to have a salvage campaign when the waste paper is needed so badly?

#### NEW REPLACEMENT BULLETINS

Availability of materials today is a very difficult matter. In response to hundreds of requests we have revised the Replacements Bulletin issued over a year ago. Approximately one thousand requests were received for the previous bulletin and the edition was exhausted months ago. This new bulletin runs over 50 pages and comments on conditions surrounding a fairly complete line of materials, as at time of preparation.

For several years we have issued bulletins on various subjects with which our readers are familiar. They have been mailed gratis to our subscribers upon request. However, the government restrictions upon the use of paper are severe—costs of all production have risen and the publishers of the AMERICAN PERFUMER have been compelled to make a nominal charge of \$1.00 per copy for this new replacement bulletin, to cover costs of preparation, production, mailing, and handling.

## Questions and Answers

#### 474 CASTOR OIL IN BATH OILS

*Q.: I need a very thick castor oil, acid value 140, of heavy viscosity, for bath oils. I am a regular buyer of caryl sulfonate for bubble bath. I would be very obliged if you would kindly let me know the names of firms from which I could buy these items.*

G. K.—OHIO.

A.: Offhand we do not know of a commercial grade of castor oil with an acid value of 140. You can get such high acid value by adding oleic or ricinoleic acid to your regular castor oil. The names of firms supplying castor oil are sent to you under separate cover. We do not know what you mean by caryl sulfonate. Is it aryl sulfonate that you refer to? If so, there are many wetting agents that answer this description. We suggest you consult the AMERICAN PERFUMER Bulletin on Wetting Agents describing these.

#### 475 CREAM COLOGNE

*Q.: We have read your articles for many years and appreciate your information. At the moment, we wish to market cream colognes and would like to have any information and formulas you may have on this type of product.*

L. K.—MICHIGAN.

A.: Since cream colognes are of several types and you do not indicate which type you prefer, we will make a suggested formula which you might modify for your use. Start off by using about two to five per cent of glycol stearate, one or two per cent stearic acid, about one-fourth per cent potassium hydroxide or about one-half per cent triethanolamine, two per cent perfume oil, two to five per cent mineral oil and the balance water. Melt all the fats together with the perfume. Dissolve the alkali in the water and add to the fats, stirring until cold.

#### 476 ISOPROPYL ALCOHOL

*Q.: The article on deodorizing isopropyl alcohol in the October issue will no doubt help us in some of our problems. We will appreciate further information on the process and the source of supply.*

A. B.—DELAWARE.

A.: Under separate cover we have sent you the names of the suppliers of the materials involved. We caution you to use no open flame in warming up your alcohol and also call to your attention that the best results are obtained when the alcohol is diluted with water. Leave the activated carbon in the product until the final filtration. It

will act as a filter cell and will produce a satisfactory lotion. Of course, aging will help. Isopropyl alcohol modifiers are also helpful. The proper selection of perfume is likewise an aid.

#### 477 BUTTER FLAVORS

*Q.: We are interested in your reference regarding the use of triacetin in butter flavors as mentioned on page 27 of the September, 1943, AMERICAN PERFUMER. Are there any regulations regarding the use of this material in food.*

F. I.—FLORIDA.


A.: We quote you from a letter recently received from the Acting Commissioner of Foods and Drugs of the F. D. A. "Available information indicates that there is no health hazard when so used if they (triacetin) are of suitable purity for food use. The responsibility as to the purity is placed by the Federal Food, Drug and Cosmetic Act on the manufacturer."

#### 478 HAND LOTION

*Q.: We are producing a hand lotion using stearic acid, lanolin and so forth, instead of the gum type lotion we now offer. Herewith is a formula which was obtained by us, but which results in anything but a satisfactory product. We would appreciate your looking over the same and suggesting corrections. (The formula follows.) The resulting mass is a soft watery cream which will not flow and if thinned separates water.*

C. C. B.—MANITOBA.

A.: After review of your formula we would suggest that you reduce the lanolin to one-third of the amount now used. Replace the ammonia with a mixture of nine parts potassium hydroxide and one part sodium hydroxide. Dissolve these hydroxides in water to make a 10 per cent solution. Use the same amount of this 10 per cent solution as of ammonia. Adjust your formula to contain 0.1 per cent gum tragacanth. The procedure should be as follows: Melt the fats and bring to 80 deg. C., separately make a mucilage of tragacanth and bring to 60 deg. C. In another container dissolve the alkali in the water along with the preservative and bring to 80 deg. C. Add the water to the fats under rapid agitation. When the emulsion temperature has dropped to about 70 deg. C., stir in the warm tragacanth mucilage and finally add the perfume. Continue agitation intermittently until cold. We would suggest that you add from two to five per cent propylene glycol to enhance the emollient properties.



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## A Study of American Musk from Muskrats

*New natural musk derived from muskrat scent glands  
has remarkable odor and fixative qualities . . .  
Makes America largest potential supplier of musk*

by EDITORIAL STAFF OF GIVAUDAN-DELAUNAY, INC.

*in collaboration with*

DR. PHILIP G. STEVENS and DR. J. L. E. ERICKSON

*Yale University*

*Louisiana State University*

TO AMERICA now belongs the distinction of having the world's largest potential musk supply. The perfume industry of this, as of other countries, has for many years used animal fixatives, musk from the muskdeer of Tibet and China, civet from Abyssinia's civet cat, castoreum from the beaver of Siberia and Northern Canada, and finally that rarest of them all, ambergris from the sperm whale.

From a quantitative and value standpoint, musk and civet have been the most important animal fixatives. At

various times other animals have been suggested as sources of musk, including the musk-ox, the muskrat and the lowly skunk. It is abundantly evident from the literature of the perfume industry that none of these last-named fixative sources ever achieved a status beyond that of museum or laboratory curiosities.

### DISCOVERY OF AMERICAN MUSK

In 1942 the first announcement was made of the efficient production of musk from the American muskrat. The

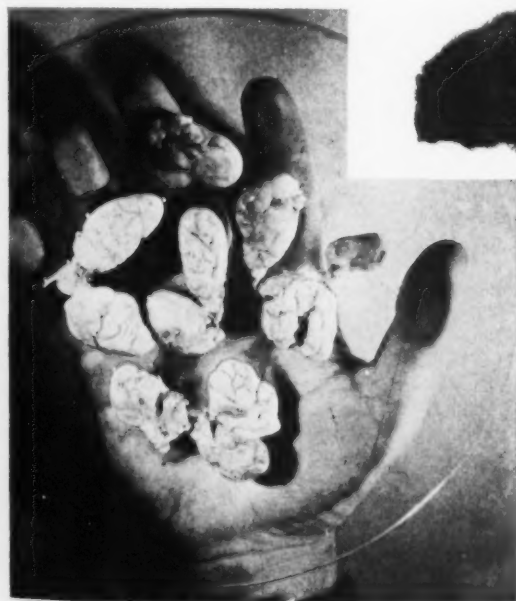
story was released simultaneously by Yale and Louisiana State University, where Dr. Philip G. Stevens and Dr. J. L. E. Erickson had isolated from the scent glands of the Louisiana muskrat a mixture of macrocyclic alcohols and ketones, related chemically to the compounds upon which the value of musk from the muskdeer and civet depends.

Second in importance only to the recognition of the chemical character of the odoriferous components of muskrat musk was the chemical process developed by Drs. Stevens and Erickson whereby the commercial value of the naturally occurring musk substances was increased almost 50 times.

When the musk-like bodies had been concentrated and isolated from the musk glands, it was found that about 98 per cent of them consisted of so-called musk alcohols and only two per cent of musk ketones. Only the latter possess the desired odor and fixative qualities, but it was found possible to oxidize in excellent yield all of the musk alcohols to musk ketones, thus utilizing the potentialities of the natural material in a way that could not be achieved by merely making a tincture of the gland contents.

### NAMING THE PRODUCT

Because the musk-like bodies were found to possess a ring structure containing respectively fifteen and seventeen carbon atoms, they were designated cyclopentadecanol and cycloheptadecanol for the musk alcohols, and cyclopentadecanone and cycloheptade-



ABOVE: The little animal from which the scent glands come.  
LEFT: Muskrat musk glands, reproduced in approximately one-half actual size.

Muskrat picture courtesy of N. Y. Zoological Gardens

canone for the musk ketones. As stated, only the ketones are valuable perfume raw materials.

The relationship between these chemical bodies and the odoriferous principles of muskdeer musk and civet becomes evident from the fact that the latter are chemically known as 3-methyl-cyclopentadecanone (muscone) and cycloheptadecenone (civetone).

Because the two musks of the muskrat partake both of the chemical and of the odor character of their muskdeer and civet analogs, alternate and more convenient chemical names suggest themselves for the former. Accordingly, cyclopentadecanone (because it contains one methyl group less than muscone) is also called "nor-muscone," while cycloheptadecanone (because it contains two hydrogen atoms more than the unsaturated civetone) is also called "dihydrocivetone."

Further on, in this article, we will come back to some of the remarkable chemistry of these compounds. For the present, it will prove interesting to discuss the place of this discovery in the history of musk-like fixatives.

While the very name "muskrat" seems to imply that the animal produces musk, previous efforts in the direction of the isolation of the musk from this rodent appear to have produced discouraging results. This is no doubt due to the fact that 98 per cent of the potential musk in the natural secretion of the muskrat is in the odoriferously uninteresting musk alcohol state—a fact not known before Stevens' and Erickson's work. As a result any ordinary extracts of the scent glands of the muskrat were bound to depend upon the two per cent of ketones naturally present in the secretion.

#### CONVERSION TO KETONE NECESSARY

Unless the musk alcohols are first concentrated and freed from inert impurities, and then oxidized to the ketone form, the product which one can obtain by extraction of the scent glands of muskrats is doomed to be a relatively weak and ineffective tincture. Furthermore, since only about two per cent of the potential effective concentration of odoriferous substances is utilized—and since the collection, shipping and extraction is expensive in any case—any muskrat musk tinctures which might be offered would cost far more than they are worth. Therefore, they would not be successful in a business way.

H. Stanley Redgrove,<sup>1</sup> in 1930, reviewed the three popular fixatives, musk, civet and castoreum. He recalled the fact that ordinary Chinese or Tonquin musk consists of the dried secretion from the preputial follicle of

the muskdeer; that Walbaum in 1906 succeeded in isolating a ketone from this musk which was its main odoriferous constituent, and that this ketone—muscone—was later characterized by Ruzicka and associates as 3-methyl-cyclopentadecanone, which they subsequently duplicated by synthesis.

Civet, a glandular secretion of the civet cat of Abyssinia, contains in addition to skatole (beta-methyl-indole) about three per cent of a ketone, civetone, first isolated by Sack in 1912. Civetone was characterized by Ruzicka as 9-cyclo-heptadecenone. Redgrove failed to call attention to Ruzicka's discovery (*U. S. Patent* 1,720,748, July 1929) that the yield of civetone from natural civet can be increased by oxidizing the civetol, also found in civet, to additional civetone.

That a secondary alcohol could be oxidized to a ketone was a fact well known many decades before Ruzicka's time. However, this well known fact was of no practical benefit to the civet business until Ruzicka, after careful study, discovered that the secondary alcohol, civetol, did occur in civet, but

lished that the corresponding alcohol, muscol, is present at all. In fact, there is evidence to the contrary.

The odoriferous constituents of castoreum seem to be quite different and consist largely of aromatic compounds as shown by Walbaum and Rosenthal,<sup>2</sup> and also St. Pfau,<sup>3</sup> who isolated among other compounds, acetophenone, benzyl alcohol and various phenols, but no large ring compounds. Dr. Stevens has made a further study of castoreum, and his paper will appear shortly in the *Journal of the American Chemical Society*.

#### RECENT ARTICLES ON MUSKRAT

Redgrove, in his 1930 article, had this to say about a product from the muskrat:

"The musquash or muskrat, *Ondatra zibethica* (Fiber zibethicus), an animal allied to the British vole and pretty widely distributed in America, is also provided with glands which secrete highly odorous material, these being attached to the sexual organs of both males and females.

"The animals are trapped for their



Louisiana marshes where the muskrat so valuable to the perfumery industry is trapped

that it possessed no odor of practical interest to a perfumer. However, upon oxidation, it could be made to yield the ketone, thus increasing the quantity of civetone obtainable from civet.

#### IDENTIFICATION IN SCENT GLANDS

The identification of dihydrocivetol and nor-muscol in the oil of muskrat scent glands was achieved by Dr. Stevens and Dr. Erickson only after much effort, thus requiring an equal amount of inventive genius. It should be pointed out, in this connection, that the joint occurrence of musk alcohols and ketones in animal scent glands, in a proportion where the alcohol predominates, is unexpected. In fact, muscone is by far the predominating musk-like constituent in the musk of muskdeer and it has never been estab-

lished that the corresponding alcohol, muscol, is present at all. In fact, there is evidence to the contrary. The odoriferous constituents of castoreum seem to be quite different and consist largely of aromatic compounds as shown by Walbaum and Rosenthal,<sup>2</sup> and also St. Pfau,<sup>3</sup> who isolated among other compounds, acetophenone, benzyl alcohol and various phenols, but no large ring compounds. Dr. Stevens has made a further study of castoreum, and his paper will appear shortly in the *Journal of the American Chemical Society*.

"An oil has been prepared from these by extraction with petroleum. It is yellowish in color, apparently contains some fatty material, and readily solidifies on cooling; e.g., in cold weather. It has an overlying odor of petroleum, which can, of course, be removed, though a product free from this drawback would be preferable. The oil is soluble in ether, glycerol, and, to a

very limited extent, in alcohol. Its odor is very powerful, but seems to lack persistency.

"A dilute tincture has a pleasing fragrance of a somewhat civet-like character, not altogether unlike that of a mixture of civet and musk xylene in dilute solution. Civet and musk are often used in conjunction, and the muskrat perfume, therefore, may prove very useful in certain combinations. A minute trace of the oil, for example, much improves the odor of rose-gerani-



Another marsh where muskrats are trapped

um oil, though, of course, many elaborate tests must be carried out to determine its value as a perfume material."

The only more recent scientific article about muskrat musk was written by Simmons and Hills<sup>1</sup> in 1933, reporting on analytical constants of an oil from the scent glands of the muskrat. The mean molecular equivalent of the solid acids indicated the presence of unsaturated acids of high molecular weight. The unsaponifiable matter, insoluble in 90 per cent alcohol, had a very high iodine value.

This was about the extent of the work directly relating to muskrat secretion until May, 1941, when an article appeared about the experiments of Charles V. Sparhawk, essential oil dealer of Sparkill, N. Y. This article,<sup>2</sup> while contributing nothing to the chemistry of muskrat musk, presented quite a bit of interesting natural history and

information regarding the geographic spread of the animal's American habitat.

Mr. Sparhawk's musk glands came from animals trapped in the Blackwater refuge which occupies an area of approximately 5000 acres of marshland on the Eastern shore of Maryland, in Dorchester County. This is one of several refuges established by the Government to give protection to migratory waterfowl and to conserve wild life generally.

#### GOVERNMENT HIRED TRAPPERS

Trappers hired by the Government are permitted to trap muskrats at a time when the superintendent of the refuge decides that the animal population needs a bit of thinning and when the quality of the fur is at its best. The trappers are paid on a piece-work basis, the animal's fur being the trapper's almost exclusive object.

The muskrat has brown fur, a long tail, webbed feet and swims very well. It is almost nocturnal in habits and stays in its burrows during the day time, especially in hot weather. It builds houses like hay-cocks for its young. It has litters of from one to six young ones, from two to four times a year.

Of the ten to twenty million muskrat skins obtained annually in the United States, Louisiana is understood to contribute from five to ten million. The fur sells for an average of \$1 a pelt, although much higher prices are paid for some grades. Aside from Louisiana and Maryland, areas abounding in muskrats are parts of Texas, Great Lakes Section of New York State, Mississippi basin and parts of Pacific Coast.

Whereas in the Blackwater refuge the Government controls the trapping operations and sells the furs, in Louisiana from 70 to 80 per cent of the trapping lands are owned by a number of individuals or companies. The trapping area is some four million acres of marshland scattered from the Mississippi boundary to the Texas boundary line along the Gulf Coast.

#### TRAPPING ON PERCENTAGE BASIS

Trapping in Louisiana is done almost entirely on a percentage basis. The land owner receives 35 per cent of the catch, while the trapper's share amounts to 65 per cent. The various trapping domains are operated on behalf of the owners by superintendents. Trappers are subject to control by these overseers. They make their rounds through the marshes, periodically picking up fur and supervising the operations. One trip may involve as much as a week, depending upon the area to be covered.

#### STUDY OF MUSKRAT TRAPPING

Dr. Erickson, through his connection with Louisiana State University, had an excellent opportunity to study the conditions of muskrat trapping at first hand. He learned that a good trapper will take from 2000 to 3000 muskrats during the trapping season (70 days). Naturally, until the value of these glands was established, the trappers discarded them.

How to collect and keep the glands was somewhat of a problem. It had to be made easy for the trappers. In the beginning, the practice was for the glands to be collected in one-gallon "varnish" cans, half filled with ethyl or isopropyl alcohol. After collection, contents could be transferred to 55-gallon drums for long-distance shipment.

#### RESULTS OF EXPERIMENTS

Through the cooperation of the Louisiana Conservation Department, Dr. Erickson was able to secure large quantities of these glands for experimental purposes.

It takes 800 to 1000 musk glands to produce 10 ounces of crude extract. This, in turn, yields about three ounces of a neutral musk oil, which contains about one ounce of macrocyclic compounds, consisting of 98 per cent of musk alcohols and two per cent of musk ketones. These are removed by vacuum distillation, and the entire mixture is then oxidized to a like weight of the corresponding ketones which have the characteristic musk odor.

The average weight of the male muskrat scent gland is about 1.5 grams. The glands of the females, even the adult ones, are very small, averaging only about one-quarter the weight of the male glands. It usually does not pay to keep them.

The laboratory procedure for obtaining the musk of the muskrat is outlined in the *Journal of the American Chemical Society*.<sup>3</sup>

The glands which had a characteristic, not unpleasant, musky odor, were drained from the alcohol, washed with ether, and ground up in a meat chopper. The ground glands were extracted with ether in a Soxhlet extractor, and the extract, the preserving alcohol, the wash ether and the expressed juices were combined and evaporated.

The concentrated product (crude extracted musk) was saponified with 10 per cent potassium hydroxide in boiling alcohol. After pouring into a large volume of water, the products were separated into acid and neutral fractions by extraction with ether. The ether extract, on evaporation, gave a neutral musk oil of fine fragrance. Distillation of this material at one mm.



pressure yielded a light yellow oil, boiling point 130-170 deg., which solidified to a waxy substance with a fine musk odor.

The neutral distilled musk forms no appreciable amounts of semicarbazone, showing it to contain very little free ketones. Failure to take up any bromine indicates a saturated substance. The optical activity was slight.

On vacuum fractionation the mixture could be resolved into about 58 per cent dihydrocivetol (C 17), about 40 per cent nor-muscol (C 15) and about two per cent of the corresponding ketones. Chromic acid oxidation converted the two musk alcohols to their ketones. These were characterized by their semicarbazones and other derivatives of known melting points.

Oxidation of the musk carbinols was carried out with chromic acid. The resulting ketones were purified by conversion to the semicarbazones, regeneration of the ketones, and recrystallization of the latter.

#### COMMERCIAL MUSK PRODUCTION

In producing commercial musk from muskrat glands, virtually the same procedure would be followed, except that it may not be necessary to separate the musk alcohols. They can be converted, as they are found in the naturally occurring mixture, to the corresponding mixture of ketones. Thus it would seem desirable to produce a highly refined animal musk, which is obtained by a process which removes the fats and fatty acids contained in the natural product, and which has advantages of uniformity and ease of employment in perfumery.

#### FINDINGS OF RUZICKA

No account of the macrocyclic musks could be complete without a reference to the monumental work done in this field by Ruzicka. This world-renowned chemist not only established the chemical structure of the odoriferous substances responsible for the odors of the principal natural animal fixatives, musk and civet; he was also the first to synthesize compounds of this character.<sup>7</sup>

This he did by first producing long chain dicarboxylic acids, the acid groups of which were located at the extreme ends of the molecules. Then he produced the salts of these acids in which the metal component was thorium, calcium, strontium, barium, or related elements. When these salts were subjected to dry distillation, the acid molecules cyclized to form the volatile-macrocyclic ketones, while the metal oxide or carbonate remained behind.

Ruzicka's pyrolysis of dicarboxylic acid salts was an extension of a pro-

cedure first undertaken in 1836 by the French chemist, Boussingault, who dry-distilled the calcium salt of suberic acid,  $(CH_2)_6 \cdot (COOH)_2$ . He obtained a product which he called suberone, but it was not until 57 years later that two German chemists, repeating the experiment, obtained the compound and found its structure to be that of cycloheptanone.

This is where Ruzicka and coworkers picked up the trail and worked with the calcium salts of longer dicarboxylic acids. Going up the scale systematically and trying a whole series of these acids, they found that they often obtained far better yields of cyclic ketones from the thorium salts than from the calcium salts. Eventually, they worked up their way to the very large cyclic (macrocyclic) ketones of the musk type.

That ring compounds of such enormous size could exist at all was a fact which it took chemists some time to assimilate. The most common ring compounds have only five or six atoms. Cyclic compounds with three, four, seven and eight carbon atoms are also known. Cyclopropane, which has three carbons in a ring, is an example of a well-known cyclic compound departing from the orthodox five or six carbon pattern.

#### BAEYER STRAIN THEORY

The Baeyer strain theory was created to explain nature's predilection for compounds with five or six atoms in a ring.

According to all the rules, products like civetone or muscone should be extremely unstable because, according to the Baeyer theory, they were subjected to a strain that would take only a baby's breath to cause them to explode into minute fragments. In their own stubborn way, the cyclic musks proved to be as stable as could be. The happy explanation offered was that, by virtue of its very length, the ring of such a musk molecule was able to twist itself into a position in which there was little or no distortion of the carbon bonds, and hence no strain.

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## Freer Trading Conditions Urged

FREDERICK E. SHONINGER, managing director of Antoine Chiris, Ltd., on November 16 delivered an address in London to the Cosmetic and Toilet Preparations Trade Ass'n. It was entitled "Essential Oils and Floral Absolutes—Is Their Substitution Possible While Maintaining Production Standards?" Mr. Shoninger is an American who has lived throughout this war in England. He expressed admiration for the way in which the British manufacturing perfumery industry had carried on in the face of great difficulties. They had made a virtue of their dire necessity to find substitutes as regards supplies, but were now reaching the point where they should look into the immediate future when once more the markets of the world will be available to their products. He believed that the Board of Trade, the Ministry of Food and others in authority are now awake to the problem that the industry requires to create now, in as large quantities as possible, stocks of floral absolutes and concretes and of rare essential oils from wherever these products are available. He regretted that they are not available in any large quantity anywhere but when they are available, the British cosmetics and perfumery industry has every interest to see that it gets its proper share. It is very difficult for a country restricted as is the United Kingdom by severe economic government control because of war-time conditions to compete in the purchase of raw materials which are in short supply abroad. If, before we can purchase such materials, we must make a proposition to a trade body who must refer it to its members, and then must in turn obtain the consent of a Ministry, then no matter how efficient these various bodies are, valuable time is lost and our competitor, the free trader in some other country, will most likely obtain his purchase long before we have been able to make a firm offer. That was the present position of the essential and floral absolutes market. Obviously, those countries whose merchants can decide for themselves what to offer and what to pay and can say so in one cable, are bound to have every advantage as against ourselves who must advise the government body of what is available and at what price and then wait for a license to buy or import.

There is, continued Mr. Shoninger, a point at which it becomes a boomerang to make a virtue of necessity by assuming that substitutes will be good enough for a resumed export trade.

*The American Perfumer*



# Cosmetic Trends in the Post-War World

*Consumers' war-time habits have created specialized cosmetic buying and reduced extravagance causing new trends in products and promotion—important facts for post-war*

by KATHLEEN SPENCER CORY

*General Manager, Paul Dreifuss Company, New York, N. Y.*

IN THE FASHION industry both manufacturers and retailers are planning for post-war consumer needs with an eye on these current trends which give indication of developing into permanent buying habits. More and more in the purchase of all types of articles of clothing women are turning to particular items for particular needs. The day of specialization is already here and here to stay. You now very rarely see high-heeled shoes worn in the country, for instance, or last year's dressy cocktail party frock being worn to do the marketing. This is true in all price levels of apparel from the highest to the lowest. The specific item—the particular article designed to meet a particular need—is, and will probably continue to be, uppermost in a woman's mind when she is buying.

## EXTRAVAGANT COSMETIC BUYING

Strangely enough, this trend does not come from an indiscriminate buying of a greater number of items but from a more careful consideration on the part of the consumer of the use to which she is going to put her purchase. War is teaching us to buy not on impulse but with a purpose, and to buy only what we intend to use.

It is a pretty well-known fact that women have always bought more cosmetic items than they really needed or used. Look at any woman's dressing table or bathroom shelf and you will find an array of jars and bottles which have stood unused almost since the day they were purchased. Beguiled by well-trained salespeople skilled in the art of increasing the size of the sales check, most women have been lured into making extravagant and unnecessary purchases. The system of demonstrator selling has caused the addition of more and more items to the so-called "treatment" lines to satisfy the constant de-



Kathleen Spencer Cory looks at future lines

mands of the demonstrator for something "new" to sell. In the treatment lines there are long lists of items on which the sales turn-over is extremely low because the use for one item is overlapped by several other closely related products in the same line. This was especially true in the fad for a new shade of lipstick. Manufacturers even resorted to a renaming of a shade already established in their lines in order to be able to run a new promotion and force sales volume.

There has been no vitally new approach in the technique of advertising and selling in the long "treatment" lines for many years. Increases in sales volume have been made by the addition of large numbers of related items—perfumes, sachets, colognes, hand bags, luggage, etc.—rather than by attempting to increase the potential sales volume on the basic or "bread and butter" items in the line. Now the saturation point has been reached and the customer is confused. Confronted by a huge array of merchandise she

hesitates to make her own choice and she is frightened by the overselling of the demonstrator.

## TREND TO BUY WISELY

Fortunately, women want and always will want beauty products. They have bought them in quantities in spite of the difficulties put in their way. But times are changing, and women with them! They are being trained to buy more intelligently. War has taught women the value of time. The consumer has learned not only to conserve and use wisely the things she buys for herself but to save precious time by buying only those cosmetics which she can use regularly and simply in a streamlined daily routine. She wants to be told in detail about the product she is buying and to find out exactly what its claims are and whether these fit her needs. Only by being informed can she use beauty products intelligently and efficiently and she really wants to do the best she can for her appearance with the least possible expenditure of time.

This changing view-point on the part of the consumer is causing the gradual emergence of a new trend, both in type of product and its sales promotion. So far, this is a trend only, but it is well worth serious consideration for its probable post-war importance.

## THE SPECIFIC

The swing is away from the long line of items presented in treatment form towards individual items sold as a single unit or towards a series of individual items. The latter may all be offered by the same manufacturer under the same label but each item is represented as a specific to meet a special need of the customer. This form of sales technique therefore, is not limited to the manufacturer of a

single item but can be, and has been, successfully exploited within the treatment line, though it is not in character with the usual type of promotion of these lines. The method recognizes the fact that not all women belong to the class of, "My dear, I buy everything that wonderful 'so and so' puts out," but that some women prefer to believe that "I have discovered the most wonderful cream for my poor sensitive skin."

The advertiser taking advantage of this premise assumes that the customer has a particular problem and then devises one of his products—and no other—to help her solve it. The woman who is worried about the beginnings of lines around the eyes, about a dry flaky skin, about a shiny nose or a furrowed brow likes to think that she can purchase just one product to help her overcome this. Undoubtedly, she will use a cleansing cream and other items also, but she is inclined to think of that quite separately and not as part of the answer to her problem. The constant repetition of the story, "this product is specially made for this one purpose and this alone" is very convincing since she invariably believes herself to be unique. Once the original sale is made, repeat sales follow easily. This type of customer remains faithful and is not so readily attracted towards each new product she reads about or sees on the store counter. For this reason alone the interest in a "specific" is worth consideration for the future as well as for the moment. It should not, of course, be implied that because a customer has bought one "specific" she is not, therefore, in the market for other "specifics" as well as for basic items of cleansing cream, cold cream and make-up.

#### THE INGREDIENT

An interesting addition to, or development of the sale of the "specific" is the inclusion in advertising and label copy of the "ingredient" story. The old hocus-pocus of the magic secret formula has lost its charm, thanks largely to the activities of the FDA, which has forced accuracy of statement on the manufacturer—and it must be admitted that in most cases he was very glad to be allowed out of his aura of witchcraft into the clear bright light of science.

The consumer has recently become aware of the value of certain components of the cosmetic formula and now she demands to know if her own pet in-

gredient has been included in her favorite cream. There may, it is true, be a flavor in this reminiscent of the allergy fad and its like but it seems that the interest in the ingredient is more than a passing fad.

#### CONTENTS NO LONGER A SECRET

The manufacturer no longer fears that if he reveals to his customer the fact that his product contains, for example, a high percentage of lanolin that she will trot right out into the kitchen and mix up her own concoction. He is, however, beginning to realize that the consumer has learned from reading the more intelligent beauty articles of today of the value of lanolin, sulfur, castor oil, milk, or other ingredients in certain types of products. The alert manufacturer, therefore, not only produces a "specific" but adds to it the "ingredient" story. He is able then to say to his prospective customer in effect, "You should use this special product for this particular purpose because it contains ingredient X."

It is, of course, essential for the manufacturer in these instances to be extremely careful in wording his statements for clearness and accuracy. If the product really will produce the results it claims, this type of sales approach is sure-fire and will undoubtedly continue to be a factor in the sale of face creams.

#### THE THERAPEUTIC

A further development worth watching, but one fraught with danger is the



Eenie-meenie-minie-mo!

revival of the promotion of creams making real therapeutic claims. These creams trespass on the drug field deliberately but evade drug labelling by telling a cosmetic story.

The newspapers recently have been full of medicine marvels. Columns have been written on the discoveries of astounding new life-restoring drugs.

It is not surprising then that women should believe that science may bring them that magic of eternal youth in which they have never ceased to believe. If a vitamin pill can bring back color to graying hair they may well reason, why shouldn't some strange mysterious new substance bring back youth to a fading wrinkled skin. The consumer is ready and willing to believe a therapeutic story if—but only if—she is given a really scientific background on it.

Some years ago a number of hormone creams appeared on the market, only to be picked up one by one for making unsubstantiated claims until a very bad odor, indeed, became associated with all these items. The ban has been lifted to a certain extent—thanks to recent discoveries in skin-absorption capacities. A few products have been able to prove their intrinsic value and the validity of the statements made about them. Undoubtedly, therefore, we can expect new items produced to capitalize on the interest in this type of product. Undoubtedly also, many of them will lack the proper authenticity. One bad product in this field can harm all the good ones! The consumer is, as we have said, much better informed than she used to be. She is not nearly so gullible and she is, therefore, easily frightened away from many good items by the exposure of one unethical one.

This is true not only of hormone creams but of all creams making rejuvenation claims. Here again the label information and the story background are of first importance. If the story has any foundation in fact and can be backed up, if it is told with the proper note of authority, the market is wide open. The consumer wants to be convinced, but she refuses to be fooled.

#### MAKE-UP FOUNDATION

It is axiomatic that a make-up is only as good as the foundation over which it is applied. Yet the widespread use of foundation creams and lotions is a very new one. The consumer is now sold on the use of a foundation, but is still befuddled as to what kind to use and why. The foundations which are selling in real volume are, again, those which are being sold itemwise as specifics, and not those that are featured as part of the long treatment program.

The treatment lines wish to cover the entire field, to have available on their lists every type of foundation for every need. Consequently, it is almost impossible to promote each one of these individually. Unless exposed to a professionally trained saleswoman who can decide first whether a light filmy trans-

lucent base or a product with high coverage properties is best and then select a particular one from vanishing creams, light fluffy creams, liquid emulsions or among cake foundations, heavy creams and powdery lotions, the customer naturally turns to an individual product. Strong advertising on the particular foundation has given her detailed information on the product and complete instruction in its use, and this inspires confidence and inevitably produces sales volume.

Intensive promotion on make-up bases is a recent development in the cosmetic business—but the consumer interest is evidently a lasting one and not a momentary fad. Any product, like a foundation, which shows the user an immediate improvement in her appearance is likely to be a permanent item on her cosmetic list. Whether the tremendous current interest in cake make-ups is a fad or not, make-up foundations have become a major selling factor in the beauty field and they are likely to remain so.

#### MAKE-UP

It is almost impossible to forecast any post-war trends in the sale of make-up items. Shortages, largely of packaging materials have forced manufacturers to cut down on the overwhelmingly large number of shades formerly carried in their lines. The consumer is content for the time being with the assortment of shades now available to her, but whether or not she will remain satisfied depends on the sales promotion approach of the manufacturer when the packaging situation is improved.

All manufacturers are aware that their sales volume in face powder, for instance, comes from not more than five or six shades. Similarly, in lipsticks, the volume comes from some eight to ten shades usually with the emphasis on two or three—this in lines which in the past have boasted more than 20 shades. The additional colors are the very high style ones introduced for publicity and fashion promotion. Some of these shades are so extreme as to be usable by only a very few people—others are so close in tone to shades already in the line as to be quite unnecessary. Demand for these items is entirely a forced one, created by skillful advertising and emphasis on the news and fashion angle.

Actually, make-up like perfume is fundamental and not dependent on fashion's whims. The further away an individual lipstick shade is from the basic range of selling shades, the less becoming the shade is likely to be. Yet we know that customers constantly, even now, ask, "What are your newest

shades?" It would take a good deal of educational work on the part of both manufacturer and beauty editor to change the point of view of most women on this since the consumer has been pretty consistently told that the extreme is "fashion right" and, therefore, must be worn. However, it has been promotion and advertising that



Oh, MY make-up takes but a minute!

has developed this demand by customers for the ever-changing, the ever-new. Consequently, promotion and advertising could undoubtedly reverse this habit. It is doubtful also if the manufacturer wishes to approach make-up selling from a simpler angle since each promotion on a so-called new fashion shade can be made to produce an immediate sales response.

Recent consumer surveys show that the most universally used of all cosmetic items—still retaining an edge over lipstick purchases—is face powder. The growing use of make-up foundations containing a high percentage of powder and giving a heavy covering to the skin has not as yet affected the sale of powder. If the trend continues and if the cosmetic chemist is able to overcome the universally drying tendency of these make-up bases, face powders may lose their top place on the cosmetic selling list. Some manufacturers are placing a tremendous emphasis on face powders at this moment and the outcome is not yet decided. Women want an effective make-up but they want one that is simple and quick to apply. If one item can be made to do the work of two and do it well, its permanence is assured. Then and then only face powder sales may drop.

In face powder shades the super-abundance of shades is not so obvious as in lipsticks, nor has the promotion been so intensive colorwise.

In the sale of make-up items the method of promoting a constantly changing range of high fashion shades

as opposed to a reiteration of the value of the basic and most universally becoming ones has been overplayed. Perhaps a happy medium may be reached in the future and high style in make-up will become an amusing occasional whim rather than an everyday mistake. In powder shades the mistake of a super-abundance of shades is not so obvious, nor has the promotion been so intensive colorwise but half the shades could be eliminated very profitably for the manufacturer without hurting the customer.

#### CHANGING CONDITIONS

Women's lives have changed during the war period. Their activities have increased in most instances. They have less leisure for outdoor sports, and so on. All these things undoubtedly have influenced their current cosmetic buying habits and, therefore, some of the trends mentioned may not be permanent. Since however, most of these trends are based on sound principle and not on fad, there is a definite possibility that they may become an established part of the cosmetic industry.

#### Packaging Color Hints

COLOR HAS for some time been known to have considerable influence over the senses. It has been proven that throwing of various colors upon a screen can effect the cure of many nervous disorders. The research done by the Eagle Printing Ink Co., New York, N. Y., has brought out several interesting relationships of colors and the reactions of the human body. For instance, "when the ears are exposed to a loud clamor, red colors appear to grow dim and green and blue colors are enhanced in brightness."

Again, strong colors have a similar effect, the eye being less sensitive to red and more to green.

Human response to color apparently has to do with the glands. At least, science is beginning to recognize that color has quite tangible effects upon the body and not solely on the eye and emotions. If heat depresses red sensations and enhances greens and blues, then maybe we are getting pretty close to an understanding of market preferences for cool light tints in spring and summer, and for rich warm hues in fall and winter. These facts should be kept in mind in selecting the shades for packaging items used only in winter and those exclusive to summer.



## Short Adages

by R. O'MATTICK

ONE OF THE things Dr. Rowmaterial likes to do as the year draws to a close is to clear out his stacks of clippings, reprints, catalogs and notes. He goes over these with great care, looking at an endless amount of printed matter and MSS on the science and art of perfumery. These have been gathered from all ends of the world during a lifetime devoted to his specialty.

We came upon him one evening last week at his home—his desk covered with bundles of papers, each neatly tied with a string of another color. "The bundles with the red strings," he explained, "contain information on rose odors, those with a lavender string on lavender, those with the green string on bergamot." The good Doctor saw me eye the numerous bundles which had black strings tied around them. "Those," he said, "are experiments that died or products that never came to life."

"I should get rid of much of this stuff. It keeps on accumulating and there seems to be no more space to store it in. But for every scrap of paper I discard a dozen others enter the collection. You cannot throw things away just because you don't need them at the moment. It was while Martha dusted this very room in my absence that one of my most famous formulas vanished—the one relating to an excellent perfume without any alcohol—a formula I developed twenty years ago and which today would be worth several fortunes!"

\* \* \*

Times change and so do the first meanings given to alphabetical abbreviations. AAA does not mean now so much Automobile Association of America or Agriculture Administration Authority or the good marks on Dr. Rowmaterial's bright grandson's report card or Acetic Acid Anhydride, no gentle plaintiffs and complainants—it means Aliphatic Alcohol Allocations, and what does that mean?

\* \* \*

The proposal of a number of distilleries to hand out whisky to their stockholders instead of dividends has provided enough material to commentators and columnists alike to fill up several full-sized barrels. We were hoping that before this column had to go to press some of the lady shareholders and their gentlemen friends in the perfume corporations would have succeeded in coaxing their Boards of Directors to hand out bottles of toilet

water (alcohol content, 80 per cent ex dividend) for the last quarter. (That, dear editor, explains the delay in getting this copy ready for the December issue of the AMERICAN PERFUMER.) But alas, nothing of the sort has as yet taken place. And many of the quips that Pat Chouli thought of have gone to waste. We cannot resist giving you a sample: "Bourhudcot cuts melon—distributes an eight-ounce bottle of its Watermelon Toilet Water to each stockholder for every 100 shares. Stock gains  $8\frac{1}{4}$  points overnight in heavy buying."

\* \* \*

This business of speaking of *floral odors* is not an exact description of what perfumers want to convey. Botanists have found that about 90 per cent of the flowers in the world either have no odor or have an obnoxious smell. When we think of flowers we think of pleasant aromas but these are the exceptions. If we take the botanist's word for it, it is no compliment to say that such and such a composition smells "just like a flower." It depends on which flower. Some day a daring perfumer will advertise: "Unlike most flowers our BOO-BOO Bouquet has a truly wonderful fragrance."

\* \* \*

Our poetical friend and fiend Mr. Sand L. Wood has sent us this contribution for Short Adages which he says we can consider as a Christmas present if we desire. He states that if the meter of the "poem" limps, it is merely in keeping with the situation at Washington and elsewhere. Thanks anyway, Sand. We are always happy to print your creations, as well as those of all our readers who help us out.

Who Controls Essential Oils?  
A question that baffles and foils  
Is *who* controls essential oils?

On everything from things that grow  
Abundantly or fast or slow

The whole, complete and entire, say  
Is up to WFA!

Chemical things from twig or tree  
Are under WPB.

So when your stenog chews her gum  
The flavor in it is the sum

Of release of oils, you will agree,  
From WPA and WPB.

\* \* \*

One of our readers tells us that there is a fine novel about the life of a perfumer by the famous French writer Honoré de Balzac. The book is called *Ceasar Birrotaux*. We asked our friend Dr. Rowmaterial about it but he says he does not have it in his collection. Nor could we find the novel in the public library. Few writers had the remarkable gift of Balzac of describing in great detail the work that his characters carried on. It would be of real interest to get hold of this book and find out what goes on in the life of a perfumer. We shall be pleased to hear from anyone who has read the book or knows where it can be obtained.

\* \* \*

To all our readers and friends we wish a

MERRY CHRISTMAS,  
PEACE and VICTORY  
and a

VERY HAPPY NEW YEAR



Tell that account executive I want some new adjectives in our perfume copy besides "Enchanting," "Enticing," and "Bewitching"



# Dissertation on the Relation of Perfumery to Art

*In this dissertation on the relation to art Dr. Gibbs takes exception to the opinion so often expressed . . . Sense of smell is one of the most sensitive and creates definite reactions*

by DR. O. S. GIBBS

Director, Medical Research, Plough, Inc., Memphis, Tenn.

QUITE RECENTLY an article appeared in *Schimmel Briefs*, No. 100, July, 1943, which discussed the status in art of perfumery. The writer took the attitude that this subject was not an art, hardly a science and more or less a matter of craftsmanship. Like so many similar articles on the subject of relationship to art, no attempt was made to formulate definitions sufficiently exact on which any conclusion could really be based. Indeed, it has been my experience that practically all such discussions are airily free from such ties and thus may continue to meander indefinitely without finality.

As I am absolutely convinced that the conclusions of this author are quite inaccurate and as there is a method of approach to this which is, in fact, the correct one, yet rarely adopted, and—a weighty reason—as this discussion is a pleasant rest and change from poisons and sick people, may I be permitted to join in?

First, one must never forget that in any matter concerning the reaction of a human being the function of the brain is of paramount importance. For this is the final analyzer on which will depend the reaction, be it positive or negative, to any given stimulus.

## ODORS PROVOKE PATTERN REACTION

Speaking broadly, two types take place. The first is a primitive patterned reaction to certain stimuli accompanied by quite violent expressions of emotion. Such effects may still take place in animals without the upper parts of their brain. Among the generators smell is quite powerful, leading either to hunger, rage or the sex-pattern reactions. Indeed, there is very considerable evidence that odor is more deeply coupled with emotional reactions than any other non-harmful stimulus. Such reactions as I have mentioned are patterned but unless the upper part of the brain is present and active, are crude and apt to become quite disoriented and

useless. Nevertheless, the fact is there that odors may provoke powerful primitive pattern reactions without the intervention of the upper parts of the brain. The upper parts of the brain start with little or probably no intrinsic patterns for they are essentially analyzers and synthesizers of all the various happenings which cause impulses to reach the brain of an animal.

At the first receipt of any given stimulus, unless this happens by chance to fall into the primitive group, such as the sex odor peculiar to many species, or is of such intensity as to create the alarm reaction, nothing will happen for such a stimulus, having no previous connections, is meaningless. However, the repetition of such stimulus, especially if associated with some already learned reaction, finally assumes a dynamic character. If, for example, a significant meal of a material has been taken which possesses a peculiar odor and, as a result, violent vomiting takes place, the vomit also being tainted with this odor, a powerful negative impulse is at once formed and distaste to that food follows. In the same way an incredible number of experiences are recorded by man as he grows older, many either consciously or unconsciously with an associated smell. An analysis of some of the odd reactions which take place in humans becomes exceedingly interesting, for the sense of smell is exquisitely sensitive and it is not necessary for odor to be consciously recognized before the patterned reaction follows.

What is true of smell is, of course, equally true of all other senses—sound, sight, muscular tone, taste and position in space—to which may be added other specially developed connections in certain cases.

## DISCRIMINATION AND CONTROL

There is another feature of the brain which is also important to appreciate; namely, that stimuli which are effective

tend to provoke a reaction and this must become controlled or epilepsy may follow. In the process of learning we never learn something quite simple; it is always more complex. For example, we do not merely learn to strike middle C on a piano; we must also, and at the same time, learn not to strike the neighboring notes. Such discrimination makes the brain work and throws stress on its machinery. Clearly, anything which will aid this discrimination, usually by adding to the positive side, will lessen the stress; for example, if you paint your middle C bright red, or alternatively, if you paint the side notes some other color. The act of discriminating is associated in many humans with some feeling which if pronounced is actually one of distress. The solution of discrimination is also associated with a feeling, in this case, of relief or actual pleasure. This type of reaction is quite pronounced—remarkably so in freed animals including especially children leaving school.

In music from which we take so many of our word tools in discussing art, notes which increase each other's value are called harmonious. Likewise, those that decrease each other's value are discords. However, the brain itself is the final analyzer.

The lesson which may be learned clearly enough from music, which space does not permit me to enlarge upon, is that real harmony or discord is the final result produced on any given brain and is not an intrinsic feature of the physical stimulus itself. It is true that a certain type of especially extensive training will increase all the associated reactions. First: the more music one has heard often enough to distinguish its pattern, the greater will be the scope of musical response. Second: if the musical training has been such that technique or craftsmanship has been learned, such also will play its part for the pattern of craftsmanship is also part of the total story. If theory and

other enlargements of the musical education have been accomplished, so will there be greater opportunities for appropriate response. Equally will there be increased opportunities for distaste (disharmony) occasioned by poor craftsmanship, ignorance of the score or unusual tempo or accentuation.

#### **VARIABILITY OF SENSES**

In each of the several sense fields with which we are possessed, exactly the same type of thing takes place. It is immaterial except, perhaps, in a quantitative emotional sense, whether the training be in sound, sight, sense of feel (remarkable in blind people), muscular balance (dancing, skating), complex orientation in space (acrobatics and flying) or the sense of smell. The final cerebral mechanism involved is the same kind occurring in different parts of the cortex appropriately connected to the major sensory channel. As there are variations in the capabilities of different parts of the same brain, some being able to use the sound analyzers well and the sight only poorly, others, orientation in space but with no sense of musical analysis, it is probable that any special ability becomes developed because less stress of discrimination is involved, and consequently, orientation is accomplished by the best available tool. Rarely if ever does a brain have equal powers of analysis for all the sensory stimuli.

So far, so good, but where does art differ from science? There is no doubt at all that technique or craftsmanship may be learned by many who cannot be called artists. There is equally no doubt, however, that occasionally such perfection and facility of craftsmanship is obtained that it produces such measure of emotional response in the beholder that it may well pass for art and perhaps may truly be called art. A study of history, especially that of the development of painting, clearly shows the difference between art and science. Science is reached when you may teach exactly every factor in its proper quantitative proportion. On the other hand, art is almost certainly associated with newness. Artists are those who reach forward and grasp new patterns of thought from the unknown. Later, these patterns may be subject to such analysis that they become reduced to the dull tedious medium of a formula, as has happened with perspective. There is, however, another type of artist; namely, one who interprets old patterns in a new form. To these belong singers and players, especially.

#### **ART FORMS NEW THOUGHT PATTERNS**

Essentially, art is like its basis. It does not depend on the mere receipt of

some combination or patterns of sensory stimuli. It is essentially the creation of new thought patterns by means of such agents and which particular sense is involved becomes quite a secondary matter.

However, even artists are somewhat practical and efforts which remain in time are clearly easier to learn and understand than those which are extremely evanescent. Thus, sculpture and painting have been very greatly developed in contrast to some other forms of art. However, certain sensations are coupled with greater emotional reactivity, among the first being rhythmic muscular movements. In consequence, dancing has been developed to a high degree. Music falls in between. Much music seems a replacement or concomitant of actual dancing; others, however, assume a definite art in creating mental patterns of their own kinds. The most neglected sense of all is smell. This is curious because the emotional reactions to this sense are apt to be the most profound and enduring of all sensory stimuli. Dreams involving smell are rare yet if they occur immediately prior to waking, are especially peculiar because the sensation of odor persists.

Basically then, the use of smell as a sensory channel for new cerebral patterns, art creations, is just as feasible as sight or sound. The same rules will pertain with the addition, however, that sensory mistakes or successes will have very marked emotional consequences.

That the mere duplication of some natural odor is the height of ambition of the perfumer reminds one most vividly of the rather ferocious discussions which occurred in pictorial art in the last century. "Get back to nature!" was the cry, and we got right back with photography only to find that this was merely another and very complicated tool for an artist to learn how to use. It was not in itself capable of an artistic creation in spite of its ability to portray nature with incomparable exactness.

#### **CRAFTSMANSHIP AND ART DIFFER**

And so if a chemist sufficiently well-trained in the appreciation of perfume is capable of duplicating exactly the perfume of a fresh rose, he will have added to the craftsmanship or the science of perfumery, but not to its art, except as a really great craftsman may, as we have already discussed. The rose is the original artist in this case. That the creation of new and lovely mental patterns by means of olfactory stimuli is not exactly akin to music is physiologically incontrovertible. Occasionally, however, one sense may evoke reactions in another and quite a few people may remark that certain sounds seem to be colored.

#### **EDUCATIONAL FACILITIES LACKING**

Hence, we may assert without any serious alarm that perfumery may become the media of artistic creation. It is already subject to most remarkable craftsmanship and no little science. What perfumery lacks are educational facilities. There are practically no training schools comparable with the numerous art and dancing institutions. There are not even "pro's" such as abound for different forms of muscular training. There are only a few places where one may learn to use his nose—so far I have not personally encountered one. Moreover, there is practically no literature on the subject that might be considered educational. There are, of course, a lot of books written on the chemistry of perfumes equivalent to similar treatises on paint manufacture. There are some books of formulas of empirical character and there are some few individuals who by reason of special ability became aware of their noses and trained them, much as others have trained their ears.

But there is no university department with its library on perfumery as an art media. There are no classes, professors, lecturers and instructors. There are—but this is a trivial loss—no degrees. Consequently, the remarkable opportunities and possibilities of this subject are yet confined to a few commercial institutions and still fewer amateurs. The art, then, has less chance to manifest itself on simple quantitative grounds than by other media. Moreover, just as opportunities develop the consumers' taste in other directions, so would expanded facilities for learning and teaching develop the appreciation of the art of perfumery.

In concluding that there is truly an art of perfumery, we do so with the clear understanding that this is merely a convenient form of expression, just as we say the art of music or the art of painting. In actual fact, however, it should be clearly recognized that art and its appreciation are strictly mental effects and the divisions of art are in reality merely a convenient recognition of the major tools and methods used by artists. Each one employs his own particular sensory channel or combination of channels, such as the quite remarkable art of Mr. Disney who successfully combines no less than three.

In pointing out that art is the mental reaction we are also tempted to remark that education itself is after all merely learning to appreciate our own appreciations. The conclusion follows that while only a few may be artists, nevertheless, education creates the ability to appreciative art and after all it is this ability that is important.

## Advantages of Emulsified Ointment Bases

EMULSIFIED BASES, according to *Schimmel Briefs*, have many advantages over non-emulsified bases for skin creams.

A recent investigation of ointment bases by F. S. Landon and L. C. Zopf of the College of Pharmacy, State University of Iowa, appearing in the August issue of the *Journal of the American Pharmaceutical Ass'n*, is of interest not only to manufacturers of medical ointments, but of cosmetics as well.

The authors investigated an ideal "washable" or emulsified ointment base which is not only more agreeable to work with, but which also overcomes the disadvantages of the greasy petroleum type of base with its interference with heat conduction and perspiration and its impermeability to secretions and exudations. This greaseless vehicle would be stable in heat and compatible with organic acids such as salicylic and benzoic acids.

The formula finally developed, after experimentation with some 60 different bases as well as many official and non-official ointments, is as follows:

|                       | GRS. |
|-----------------------|------|
| Carbowax "4000" ..... | 20   |
| Stenol .....          | 37   |
| Glycerine .....       | 30   |
| Water .....           | 12   |
| Duponol C .....       | 1    |

In experiments substituting cetyl alcohol for the Stenol, heat stability was sacrificed and grittiness appeared.

In other experiments it was attempted to attain more heat stability by substituting propylene glycol, ethylene glycol, diethylene glycol and Carbowax "1500" respectively for glycerine. Ethylene glycol was found to give the greatest heat stability but studies in this direction were discontinued due to the fact that the Food and Drug Administration disapproves of the use of this material in large proportions. Preparations with propylene glycol and diethylene glycol liquefied at 46 deg. C.

Preparations with glycerine were found to be more adhesive and less gritty than those with ethylene, propylene or diethylene glycol.

Skin tests showed that the base prepared according to the formula suggested above did not produce irritation or dermatitis when kept on the skin of the forearm for 24 hours.

It was found that the base could easily be removed from the skin with a slow stream of water from a laboratory faucet, with little if any friction required.

## Post War Period a Challenge to Business

THE DOUBT, even fear, that exists in the minds of many as to just how the American Way of Life is going to be brought back not only to normal but developed into a bigger and better way of life does not take into consideration the tremendous task that American business has done in converting from a peace-time to a war-time economy. One of the greatest questions in this post-war development is voiced by Corrie Cloyes in an article in the November issue of *Domestic Commerce*, "Where does the distribution system fit into the post-war picture? What will be its status if the goal—maximum employment and production of more goods for more people at lower costs—is achieved?"

The "lower costs" is the catch over which so many falter. They envision not only a distribution controlled as at present by government regulation, but an expansion of this system to such an extent that private enterprise with its former methods will be squeezed out completely. They envision hazily the skies filled with transport cargo planes and delivery trucks, and this picture is beyond their comprehension as it should be.

### PROGRESS ASSURED

There need be little fear of such an economic revolution. Our past history should be sufficient to allay any fears that we may have as to the ability of American business to develop consistently and persistently along sane, sensible and promotional lines. The "better mousetrap" theory that set the stage for the great economic development after the last World War not only provided us with an increased number of goods and services, but so refined and eased the method of getting them that this competitive system built for us the highest standard of living in the world.

And the point to bear in mind is that consumers didn't build it. They didn't sit down and make up a list of what they wanted and what they didn't want. It was the ingenuity and resourcefulness of American business that did it—and will do it again.

### PROTECT YOUR "GOOD WILL"

It is true that a great many have been swallowed up in this war-time production period; have had to discontinue manufacture entirely, but the foresighted—the ones needed to rebuild our peace-time economy—have kept alive their trademarks and retained their goodwill through advertising, and when the time comes for reconversion they will be ready with an improved

product and an improved means of merchandising and delivering it.

Not a small part of this method of keeping customer good-will has been their efforts to help their dealers weather this storm, either by showing them the best way to sell what is available or to take on other lines of merchandise as well as rendering counsel on management. There is scarcely a peace-time industry that has not had its production curtailed, its carefully built up distributive system sorely cramped, its whole output harassed by material and manpower shortages, rationing and necessary but difficult restrictions, but in spite of all this they have been able to carry on. Looking to the future they are doing everything possible to uphold their former channels of distribution, while at the same time conjuring up new products and new methods of distribution to be ready for that eagerly-awaited day of peace.

### CONSUMER TAKEN CARE OF

As we review the merchandising of the past decade, we fail to find any signs of consumer not being supplied with the newest developments of industry, and at an increasingly lower rate. The methods of distribution—wholesaling and retailing—the art of merchandising including all the mediums used by producers and distributors to create a desire for their goods—in simple terms spell for the future a stimulated demand.

Even under present hardships the magnificent job done by the cosmetic industry alone bears witness to what an industry burdened with government restrictions, shortages of raw materials, lack of containers, etc., can do. Already plans are being made for post-war conditions.

One firm that has converted—or rather expanded—its plant to take over important war work is making plans to expand its South American trade in order to retain its staff intact after the war. This is one way of withholding many war workers from being a post-war employment problem.

Another firm has already made plans to redesign its line to give it added appeal in this post-war competitive market.

In such a world the "post-war goal of maximum employment and productions is obviously essential," and only with the faith in the ingenuity of the American business man and in free enterprise can more goods be made for more people, thus strengthening the stimulated demand system with resultant lower costs.



# Technical Abstracts from Scientific Literature

*These brief abstracts listed provide a convenient key to current scientific literature of the world on perfumes, cosmetics, toilet preparations, soaps and dentifrices*

by MAISON G. DENAVARRE

**Castor Oil, the Dihydroxystearic Acid of,** Geo. King, *J. Chem. Soc.*, 387-391, 1942.—Oxidation of the naturally occurring dihydroxystearic acid of castor oil, m.p. 141 deg. C., with periodic acid has been shown to afford n-aldehydo-octoic acid and nonaldehyde, thus confirming its constitution as 9:10-dihydroxystearic acid.

**Spontaneously Forming Emulsions. Mechanism of Formation of Soluble Oils Adsorption Layers in Disperse Systems,** K. Pospelova and P. Reh-binder, *Acta Physiochim. U.S.S.R.*, 16, 71-87, 1942 (in English).—Phase diagrams are determined for the systems hydrocarbon oil, soap of sulfonated castor oil, Na oleate or naphthenic acid soap. The line separating the region of soluble oils from that of emulsions is located. The dispersity and stability of emulsions is located. The dispersity and stability of emulsions are measured as a function of the composition of the emulsion forming oil and the soaps present. The phase inversion of soap in oil on the addition of water required, depends on the degree of saponification of the acids in the system. The discontinuous inversion can be followed by measuring the electrical conductivity of the mixture. (*C. A. through Oil and Soap*, 20, No. 7, 148.)

**Toilet Preparation,** U. S. Pat. 2,320,478.—A toilet preparation for topical application comprising a preparation which depresses the respiration of the tissue to which it is applied combined with a respiratory stimulating agent which stimulates the tissue respirations as determined

by manometric measurements and thereby compensates at least in part for the depressing effect of the preparation. (*Through Soap and San. Chem.*, 19, No. 8, 65.)

**Surface Tension Studies,** Raymond Cavier, *Compt. rend*, 212, 1146-8.—The surface tension of solutions of the sodium soaps of oleic, linoleic, linolenic, ricinoleic, dibromoricinoleic, lauric, alpha-bromolauric, hydroxystearic, hydrocarpic and chaulmoogra acids was measured. The reduction in surface tension in unsaturated soaps is greater the more double bonds in the molecule of the acid. The reduction in surface tension of ricinoleic acid soap is greater at the higher concentrations than those of plain unsaturated acid soaps. Presence of a triple bond decreased the lowering of surface tension. (*Soap and Sanitary Chem.*, 19, No. 7, 65.)

**Alkylene Oxide Addition Products Suitable for Preparing Cosmetic Creams, Colorless or Light Colored,** U. S. Pat. 2,293,868.—A process is employed for making colorless or light colored alkylene oxide addition products which involves bringing 1, 2 ethylene oxide or 1, 2 propylene oxide in effective contact with one of the group consisting of 1, 2 alkylene oxides having a 2 or 3 carbon atoms to the molecule, lower members of the alkylene glycol series and monsubstituted lower members of the alkylene glycol series which have only one free hydroxyl group in the molecule and causing at least one molecule of alkylene oxide to add to one of the group in the presence of an acidic fluorine compound and recovering an alkylene oxide addition product.

**Isopropyl Esters such as the Laurate, Myristate and Palmitate as Carriers for Cosmetic Creams, Medicaments, Perfumes and Flavors, etc.,** U. S. Pat. 2,293,551.—Various details are given of the preparation and use of the esters which boil at 120 deg. to 165 deg. C. under a pressure of five mm. and which are substantially nontoxic odorless tasteless water-white liquids at room temperatures.

**Menthols Synthetic,** W. E. Huggett, *Pharm. J.*, 149, 81, 1942.—The present short supply of natural l-menthol has aroused a keener interest in other members of the menthol group. There are four isomeric forms of the compound p menthene-3-ol; menthol, neo-menthol, iso-menthol and neo-iso-menthol, and each of these can occur in two optically active and one racemic modification giving a total of 12 different configurations; d-neo-menthol occurs in nature usually associated in small quantities with l-menthol, and in separation by crystallization of the latter from peppermint oils, it remains behind in the so-called dementholized oil. There is no authentic evidence that any of the menthols from the iso-menthones occur in nature. dl-Menthol can exist in either of two crystalline modifications having melting points, respectively, of 28 deg. and 38 deg. C.

The higher melting form has the property of passing over to the other modification below its melting point, so that a melt at temperatures anywhere between 28 deg. and 38 deg. C. is possible, depending on the conditions and the rate of heating. It usually occurs in commerce in very small needle-like crystals which tend to cake together on standing undisturbed for any length of time; this



caking is probably due to the instability of its crystalline forms. l-Menthol also exists in several crystalline modifications, but while the lower melting forms are unstable, the melting point of 43 deg. C. is usually well defined. Both optically active and inactive forms of the neo-menthols exhibit a great tendency when once molten to remain in that state and dl-neo-menthol, even when perfectly pure, has been known to remain in liquid form at ordinary laboratory temperatures for as long as six months. d-neo-Menthol, melting point 15 deg. C., is difficult to obtain in a solid state unless a seed crystal is available. Menthol isomers possess distinctly differing tastes and smells which are extremely difficult to describe although no difference, unless that of intensity, is noticeable between the optically active and inactive forms of the same isomer.

**Product for Accentuating Food Flavorings and Perfumes, U. S. Pat. 2,283,589.**—A product suitable for use with vanilla, vanillin, coumarin, etc., is prepared by extracting copra, from which the oil has been largely expressed, but containing its other natural constituents, with an aqueous alcoholic of a concentration not over about 60 per cent, suitably about 40-60 per cent. (Through C.A.)

**Soap, Effect on Skin, R. G. Harry, British J. Dermatology.**—In a general study of skin and the effect on it of soap and other substances, it has been found that sweat is bactericidal and fungicidal. Furthermore, since the normal skin swarms with various organisms including staphylococci, diphtheroids and monilia without becoming diseased, it is logical to assume that the skin surface must possess an antibacterial activity of some sort which reduces the pathogenic activity of the organisms without destroying them. The acid mantle of the skin may be important in preserving its protective factors. The normal pH of exposed skin may range from 4.2 to 5.6 with an average of 5.3 to 5.56.

Skins which are incapable of neutralizing alkaline solutions with which they come in contact are more easily sensitized to external allergens. Alkalinity is an important factor in the production of eczema by soap. Acids can also irritate the skin, perhaps

through the hydration and swelling of proteins. In addition to the possible influence of pH on the defensive processes of the skin, the respiration of the skin has been termed a more accurate measure of its vitality than any other of its functions and it has been found that deviation of its pH from normal is reflected in a lowered tissue respiration. Buffered materials are suggested as most suitable for use on alkali sensitive skins. (Through Soap, 19, No. 7, 58.)

**Butylene Glycol as a Glycerol Substitute, J.J.L. Zwicker, Pharm. Weekblad 78, 1261-4, 1941. Chem. Zentr., 1, 896, 1942.**—Commercial 2,3 butylene glycol melts at 28 deg. but remains liquid at room temperature if 10-20 per cent of water is added. Its aqueous solutions are somewhat less viscous than glycerol solutions of similar concentration. It can be substituted for glycerol in suppositories and all pharmaceutical preparations for external use without danger. It should not be added to preparations for internal use since it is somewhat toxic and in sufficient concentration causes kidney damage. (C.A. 37, 2134, 1943.)

**Production of Iris Oil, I. V. Vinogradova and A. N. Baskakova, Trudy Vsesyuz, Inst. Efirno-Maslichnoi, Prom, Ratsionalizatsiya, Pereabotki, Efirno-Maslichnogo, Syr'Ya, 8, 59-69, 1940. Khim. Rejerate. Zhur, 4, No. 1, 145, 1941.**—The fine ground roots were covered with six volumes of water under ordinary pressure and heated with steam in a vessel equipped with a dephlegmator, returning the distillate into the flask. Experiments on saccharifying the root starch with acids, malt, saliva, ptyalin and fungi and rectifying oil by low pressure steam distillation produced unsatisfactory results.

**Cosmetic Formulation in Wartime. Notes on the Utilization of Raw Materials. Joseph M. Vallance. Soap, Perfumery and Cosmetics, 14, 511-14, 1941.**—Stearic acid and glycerol are practically no longer available for cosmetic use. Vallance suggests the use of formulas requiring no glycerol, the preparation of small batches for prompt use and the substitution of gums. An odorless hardened fish oil fat acid and a partially sulfated or phosphated mixture of cetyl and

stearyl alcohols are mentioned as replacements for stearic acid. Emulsifiers, absorption bases, dispersing agents, wool wax, sodium alginate and inert gelatinous alumina are discussed. Several cosmetic formulas are detailed. (C.A. 37, 499, 1943.)

**Aqueous Oil Emulsions, Ger. Pat. 706,808.**—Esters of unsaturated higher fatty acids and monohydric aliphatic alcohols are transformed entirely or partly into their chlorohydroxy derivatives and are emulsified with the aid of the usual emulsifiers. (Through C.A. 37, 2848, 1943.)

**Composition of Use in Bleaching Hair, U. S. Pat. 2,283,350.**—For use with an aqueous solution of hydrogen peroxide, an oleaginous solution is prepared, such as one containing a mineral oil or peanut oil together with an amine such as monoethanolamine and an emulsifying agent such as an alkyloamine soap. (Through C.A.)

**Aliphatic Diamides of Sebacic Acid, U. S. Pat. 2,304,475.**—Stable waxy products of high m. p., suitable for use in water-proofing fabrics, polishing furniture, etc., are prepared by heating sebacic acid with a primary aliphatic amine containing at least 12 C. atoms, such as dodecyl amine, octadecyl amine or primary amines prepared by hydrogenating high molecular weight nitriles derived from fatty acids of hydrogenated fish oil. Several examples with details are given. (Through C.A. 37, 2849, 1943.)

**Storage Vessel for the Radioactive Treatment of Cosmetic Creams, U. S. Pat. 2,269,026. J. Am. Pharm. Assoc., 32, 127, 1943.**—A pot for the treatment of different substances such as creams, pastes, pomades, ointments, natural or artificial clay, bath salts and the like, is provided with a lid, the pot and lid being provided on substantially their entire inner surface with an inner removable double wall. The inner wall comprises a projection closed at the top thereof, this projection being arranged substantially in the middle and extending over at least half the inner height of the pot, the inner wall limiting a space within which is housed a material capable of generating radioactive emanations.

# The Teen-Age Girl Is a Potential Cosmetic Buyer

*Figures show that the teen-age girl should not be overlooked when planning any merchandising campaign . . . More and more her influence on the family's buying habits is being felt*

**D**ID YOU KNOW that the average teen-age girl selects and buys her own powder, lipstick, nail polish, face creams and other toilet goods? She also selects her own toothpaste and soaps.

A survey made recently by *Calling All Girls*, magazine for girls sponsored by *Parents' Magazine*, shows that the teen-ager knows products and knows her own mind when it comes to purchasing. To obtain this information a questionnaire was sent to a selected group of 2,000 of the estimated 2,360,000 readers—a representative cross section of the magazine's readership.

According to this survey the teen-age girl selects her own cosmetics, soaps and toothpastes although her family usually pays for them.

The average teen-age girl, according to the survey, is 13 years old when she begins to use lipstick, powder, face cream, deodorants, and is only 12 when nail polish becomes a "must" on her buying list. The rouge item is low in use with this age as they have complexions that rarely require it—thus

the figure, 17.9 per cent using rouge, is to be expected.

The importance of this survey as a means of pointing up your sales will be realized from the figures in the following tables:

|                       | PAY FOR<br>THEMSELVES<br>PER CENT | SELECT BUT<br>FAMILY PAY<br>PER CENT | DO<br>BOTH<br>PER CENT | NO<br>ANSWER<br>PER CENT |
|-----------------------|-----------------------------------|--------------------------------------|------------------------|--------------------------|
| Make-up, powder, etc. | 63.5                              | 9.0                                  | .9                     | 8.2                      |
| Nail Polish           | 67.0                              | 9.1                                  | 1.2                    | 22.7                     |
| Tooth paste or powder | 15.5                              | 63.00                                | 5.2                    | 16.3                     |
| Toilet soap           | 9.0                               | 68.0                                 | 3.0                    | 20.0                     |
| Face creams           | 33.7                              | 28.4                                 | .5                     | 37.4                     |
| Other toilet goods    | 30.0                              | 45.00                                | .8                     | 24.2                     |

In questioning this group on the care of the hair, the following figures are significant: 2.1 per cent shampoo their hair more than once a week; once a week, 50.9 per cent; every 10 days, 3.9 per cent, every two weeks, 41.9 per cent and every two to three weeks, 1.2 per cent.

To the question as to whether the shampoo is given at home or at a beauty shop; the following figures are quite reconcilable: 89 per cent at home; 8.5 per cent in a beauty parlor;

and 2.5 per cent have it done at both.

This tremendous market for cosmetics is one that should not be overlooked by those wishing to boost in no small way cosmetics sales. It is at this period of the young teen-ager that she

is forming her likes and dislikes, and once she has decided she wants this lipstick and that face powder, she is very apt to carry these preferences over to young womanhood.

This fact alone, aside from the need for obtaining additional business, makes the manufacturer realize that if he is not to have his sales diminish rather than increase in the years to come, he must develop a preference for his products right now, and have that preference carry over into later years.



A teen-ager very pleased with her selection

|                                      |                     | LIPSTICK<br>PER CENT | POWDER<br>PER CENT | ROUGE<br>PER CENT | FACE CREAM<br>PER CENT | NAIL POLISH<br>PER CENT | PERFUME<br>PER CENT | DEODORANT<br>PER CENT |
|--------------------------------------|---------------------|----------------------|--------------------|-------------------|------------------------|-------------------------|---------------------|-----------------------|
| When Did<br>You Start<br>to Use?*    | Under 10            | .1                   | .4                 | ...               | .7                     | 5.7                     | 6.2                 | .07                   |
|                                      | 10 years            | .2                   | 1.3                | .07               | 2.1                    | 6.7                     | 9.2                 | 3.0                   |
|                                      | 11 years            | 2.4                  | 3.9                | .5                | 4.1                    | 9.8                     | 9.2                 | 6.7                   |
|                                      | 12 years            | 13.0                 | 10.8               | 1.2               | 11.1                   | 21.4                    | 19.1                | 19.1                  |
|                                      | 13 years            | 27.8                 | 19.7               | 4.9               | 17.4                   | 15.7                    | 13.5                | 22.9                  |
|                                      | 14 years            | 21.5                 | 14.7               | 6.2               | 12.6                   | 9.6                     | 10.5                | 13.2                  |
|                                      | 15 years            | 7.1                  | 6.8                | 3.6               | 6.0                    | 2.3                     | 4.5                 | 4.9                   |
|                                      | 16 years            | 1.3                  | 1.4                | 1.2               | 2.5                    | 1.3                     | 1.9                 | 1.2                   |
|                                      | 17 & over           | .07                  | .14                | .37               | .07                    | .37                     | .02                 | .07                   |
| Do You Use<br>Your Own or<br>Borrow? | Use Own             | 74.3                 | 61.5               | 17.2              | 50.5                   | 68.8                    | 68.4                | 68.7                  |
|                                      | Borrow              | 1.1                  | 15.0               | 1.5               | 5.2                    | 4.5                     | 6.4                 | 7.3                   |
|                                      | No Answer           | 24.6                 | 23.5               | 81.3              | 44.3                   | 26.7                    | 25.2                | 24.0                  |
| Where Do<br>You Usually<br>Buy It?   | Dept. Store         | 19.3                 | 15.0               | 4.1               | 12.1                   | 11.5                    | 34.0                | 9.4                   |
|                                      | 5 & 10c Store       | 43.4                 | 24.3               | 8.2               | 20.1                   | 52.2                    | 15.5                | 35.5                  |
|                                      | Drug Store          | 24.7                 | 21.2               | 5.8               | 24.3                   | 14.3                    | 25.1                | 30.0                  |
|                                      | No Answer           | 12.6                 | 39.5               | 81.9              | 43.5                   | 22.0                    | 25.4                | 25.1                  |
| How Often<br>Do You<br>Buy It?*      | Every 10 days       | 2.9                  | .1                 | ...               | 1.9                    | 5.4                     | 2.7                 | 4.8                   |
|                                      | 2 weeks to 1 mo     | 24.4                 | 16.0               | 3.0               | 18.9                   | 29.4                    | 14.4                | 32.7                  |
|                                      | 6 to 8 weeks        | 10.4                 | 6.5                | 1.5               | 6.5                    | 8.3                     | 3.4                 | 8.0                   |
|                                      | 3 or 4 times a year | 16.2                 | 10.8               | 1.7               | 7.1                    | 12.0                    | 13.3                | 10.8                  |
|                                      | Twice a year        | 8.7                  | 12.2               | 4.1               | 7.1                    | 7.7                     | 13.7                | 6.7                   |
|                                      | Once a year         | 6.6                  | 8.2                | 5.7               | 5.2                    | 4.9                     | 10.5                | 2.5                   |

\*The figures for these two questions do not total 100 per cent because some of the girls do not use cosmetics or toiletries, or do not tell.

# A Survey of Oil of Opopanax

Sources and description—physical and chemical properties of opopanax . . . Oil a valuable perfume ingredient . . . The resinoid opopanax a strong fixative in perfume compounds

by DR. ERNEST GUENTHER

Chief Research Chemist, Fritzsche Brothers, Inc., New York, N. Y.

IN PAST YEARS true opopanax was the concrete juice or oleo-gum-resin of *Opopanax chironium* Kch. syn., *pastinaca opopanax* L. (fam. *Umbelliferae*), a plant closely allied to the common parsnip and native to the warm countries of the Levant. Wounding the stem at its base caused exudation of a juice which, after drying in the sun, constituted the opopanax of commerce.

This type of opopanax, however, is no longer available; it has become a rarity found here and there in the collections of importers, druggists and perfumers.

Today's commercial gum opopanax, also called bisabol-myrrh or sweet myrrh, is the sun-dried exudation from the bark of *Commiphora erythraea*, var. *glabrescens* Engler, a tall tree growing in the western parts of Somaliland. The gum is collected by the natives, sold on the market of Berbera and shipped to Aden, from where it is exported to Europe, India and China. In the Far East the gum finds wide employment as a constituent of incense.

Gum opopanax is partly soluble in alcohol. The alcoholic solution after filtration can be concentrated, preferably in vacuo, and yields the so-called "resinoid opopanax," a very viscous mass which, however, is soluble in alcohol and essential oils.

According to Tucholka<sup>1</sup> the gum opopanax (bisabol-myrrh) can be distinguished from the lower-priced gum myrrh (heerabol-myrrh) by the following color reaction:

Six drops gum opopanax petrol ether extract (1:15) are mixed with 3 c.c. glacial acetic acid and carefully poured upon 3 c.c. of concentrated sulfuric acid. If the gum is opopanax, the layer of contact between the two liquids turns pinkish red and shortly thereafter the entire acetic acid layer assumes a pink

color. If the gum is myrrh, the layer of contact turns green and the whole acetic acid layer assumes only a very faint pink color.

The volatile oil of opopanax dissolved in petrol ether (1:40) gives the same color reaction but very much weaker. Oil of myrrh does not show any color reaction at all if treated under the same conditions.

The typical odor of gum opopanax is caused by a volatile or essential oil which can be obtained by steam distillation.

## DISTILLATION

It is advisable to crush the gum previous to distillation. According to Gildemeister and Hoffmann,<sup>2</sup> the yield of oil varies from five to ten per cent. According to our own experience, it ranges from 3.5 to eight per cent.

## PHYSICO-CHEMICAL CONSTANTS

Oil of opopanax (bisabol-myrrh) is a liquid of greenish yellowish color possessing the characteristic balsamic odor of the gum. When exposed to air it resinifies easily.

According to Gildemeister and Hoffmann<sup>2</sup> the oil has the following physico-chemical constants:

|                               |   |
|-------------------------------|---|
| Specific Gravity at 15°C.     | 0.870 to 0.905  |
| Optical Rotation              | —8° to —14°   |
| Refractive Index at 20°C.     | 1.489 to 1.494  |
| Acid Value                    | Up to 3.7   |
| Ester Value                   | 7 to 20   |
| Ester Value after Acetylation | 37 to 55  |
| Solubility                    | Soluble in 1 to 10 volumes of 90% alcohol; sometimes with opalescence or turbidity. |

During recent years the constants of opopanax oil have undergone changes



Typical view of docks, showing French and Spanish ships tied up ready for loading

<sup>1</sup> Arch. d. Pharm. 235 (1897), 289.

<sup>2</sup> Die Ätherischen Öle, 3d Ed., Vol. III, p. 156.

for reasons unknown. According to Messrs. Schimmel & Company,<sup>4</sup> the constants now vary between the following limits:

Specific Gravity at 15°C. 0.8835 to 0.9170  
Optical Rotation —12°11' to —19°28'  
Refractive Index at 20°C. 1.49039 to 1.49535  
Acid Value 0.6 to 2.6  
Ester Value 5.6 to 16.8  
Ester Value after Acetylation 29.9 to 57.9

Oils which we distilled from imported gum in our French factory (Seillans, Var.) showed the following constants:

Specific Gravity at 15°C. 0.880 to 0.904  
Optical Rotation —11°56' to —17°30'  
Refractive Index at 20°C. 1.4909 to 1.4952  
Saponification Value 7.5 to 11.3  
Solubility at 20°C. Usually soluble in 8 to 10 volumes of 90% alcohol; in some cases hazy in 10 volumes of 90% alcohol.

Igolen<sup>8</sup> reports the constants of an oil distilled from true opopanax (yield three per cent) as follows:

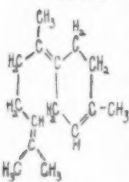
Specific Gravity at 15°C. 1.006  
Optical Rotation ±0° (in a 25% alcoholic solution)  
Refractive Index at 20°C. 1.5165  
Acid Value 3.08  
Ester Value 173.95  
Solubility Soluble in 10 volumes of 70% alcohol and in 2 volumes of 75% alcohol.

The oil had the typical odor of true opopanax which reminds of foenugreek, lovage, costus root and licorice.

#### CHEMICAL COMPOSITION

The chemical composition of opopanax oil is comparatively little known except for the presence of bisabolene, which has been the object of intensive investigations. Aside from this monocyclic sesquiterpene the oil contains, according to our present knowledge, several sesquiterpene alcohols, the chemistry of which remains obscure.

**bisabolene** The sesquiterpene was first isolated from opopanax oil by Tscholka<sup>9</sup> and named bisabolene. The Schimmel chemists<sup>10</sup> identified it in an oil of own distillation as trihydrochloride, C<sub>15</sub>H<sub>24</sub>·3HCl; M. P. 80°C. Ruzicka and van Veen<sup>11</sup> dis-



<sup>4</sup> Ber. Schimmel & Co., 1939, 59.

<sup>5</sup> Les Parfums de France, 14 (1936), 302.

<sup>6</sup> Op. cit., p. 292.

<sup>7</sup> Ber. Schimmel & Co., Oct. 1904, 69.

tilled the bisabolene fraction of opopanax oil over metallic sodium and found the following constants:

B. P. : 130 to 135°C.  
at 12 mm.  
pressure

$d_{4}^{15}$  : 0.875

$n_D^{20}$  : 1.493

Years ago Ruzicka and Capato<sup>9</sup> expressed the opinion that natural bisabolene is composed of a mixture of  $\alpha$ ,  $\beta$ , and  $\gamma$  isomerides. Later Ruzicka and van Veen<sup>11</sup> showed that bisabolene, as occurring in opopanax oil, consists mainly of the  $\gamma$  form.

About the synthesis of bisabolene see Ruzicka and Liguori<sup>12</sup>.

$\gamma$ -bisabolene

<sup>9</sup> Liebigs Ann. 468 (1929), 137.

<sup>10</sup> Helv. chim. acta. 8 (1925), 259.

<sup>11</sup> Liebigs Ann. 468 (1929), 133.

<sup>12</sup> Helv. chim. acta. 15 (1932), 3.

<sup>13</sup> Ber. Schimmel & Co., Oct. 1904, 69.

**sesquiterpene alcohols** According to the Schimmel chemists<sup>13</sup>

opopanax oil contains also small quantities of high boiling sesquiterpene alcohols which possess the characteristic odor of opopanax.

B. P. : 135 to 137°C.  
at 2 mm.  
pressure

The chemistry of these alcohols remains unknown.

#### EMPLOYMENT

Oil of opopanax is a most valuable perfume ingredient. Its warm balsamic and exotic odor blends into bouquets of oriental character. If skillfully employed, oil of opopanax produces rather strange but very attractive tonalities harmonizing with myrrh, olibanum, sandal, vetiver and patchouly.

The oil was formerly employed as an antispasmodic and deobstruent but is now rarely used in pharmacy.

Resinoid opopanax is a most useful fixative. It possesses an odor similar to that of the oil but less pronounced, imparting strength and lasting tonalities to perfume compounds.

## Alien Property Custodian Requirements

AN ORDER REQUIRING all persons who claim any interest in trademarks, commercial prints or labels now or formerly owned by nationals of designated foreign countries, to report their interest, including any agreement or claims of ownership, on Form APC-31 by February 1, 1944, was announced recently by Leo T. Crowley, Alien Property Custodian.

The purposes of the order are to locate and describe whatever interests are held in the United States with respect to trademarks, commercial prints and labels of designated foreign nationals and to obtain information in the national interest which will aid in the administration of those marks taken over by the Custodian.

The Custodian's order No. 16 requires reports from any person claiming any right, title or interest, in or to any trademark, commercial print or label if obtained from a designated foreign national or anyone on his behalf on or before January 1, 1939; or, regardless of when obtained, if on or after January 1, 1939, money or other consideration

has become payable or has been paid to a designated foreign national or anyone on his behalf with respect to such interest.

No reports need be made as to trademarks, commercial prints or labels in which the interest of the reporter was obtained before January 1, 1939, if, on or after that date, no money or other consideration was or has become owing or paid to a designated foreign national or anyone on his behalf.

In outlining the order, Mr. Crowley distinguished between enemy owned trademarks and trademarks belonging to nationals or countries in that with respect to the latter, the administration policy of his office will be one of general supervision and that vesting action will be taken only when deemed necessary in the public interest or to protect the owner of the trademark.

Copies of Form APC-31 and instructions for reporting may be obtained through the Office of Alien Property Custodian in Washington, New York, Chicago and San Francisco. Completed reports are to be returned to Washington, D. C.



## Sachets—A Temporary Popular Perfume Substitute

DUE TO THE STRICT allocation of alcohol for civilian uses, the manufacture of perfumes has been so materially reduced that scents in some other form have been necessary for manufacturers to fill the demands for their much-sought-after odors. This has led perfume chemists to consider the "sachet" as a temporary substitute for the irreplaceable liquid perfume and toilet water.

Although the consensus is that sachets can never replace perfumes, still their use has grown tremendously in the past year. Half a loaf is better than none.

### SACHETS OF BY-GONE YEARS

Various types of sachets have been in existence for many years; probably the earliest being the old pot-pourri jars found on practically every mantle and filled with dried rose leaves that were used to scent the room. Their contents were usually in the natural leaf form. Later the leaves were dried and spices, aromatic herbs and scented woods were added to give the desired odor. But these are not the sachets of today.

### RECENT DEVELOPMENTS

The sachet as we know it today is a finely ground powder used to scent lingerie, dresser drawers, closets, etc. One manufacturer even carries a scented paint with which to paint the inside of the dresser drawers or the inner walls of the closet. These uses are practical and will undoubtedly always find a fairly wide usage, but the sachet that is replacing the liquid perfume and retains its odor for any considerable length of time requires a much more complicated method of manufacture.

### DRY PERFUME BASES

The base of these dry perfumes is kaolin, bentonite, kieselguhr, or a combination of these. Incorporated into this base is about one to three per cent of the perfume oil. To effect this union about 10 per cent of the base is separated to which is mixed very thoroughly the desired oil. To this mixture is added the balance of the base—90 per cent. This again requires thorough mixing—very thorough mixing—to insure even distribution. When the proper consistency has been obtained the powder should be packaged immediately in order to preserve the odor. It can readily be realized that the minute particles saturated with the

perfume oils afford a tremendous exposed surface for evaporation. Another disadvantage is the loss due to filtering through the material of which the finished sachet is made. It is for these reasons that other forms of dry perfumes have been sought.

### THE WAX TYPE SACHET

A better and more lasting sachet has been made by using a good grade of paraffin wax as a base. The wax is melted and to the melted wax is added the perfume oil. This mixture is stirred while still in the liquid form and left to congeal. The cake is cut in the desired sizes or shapes, wrapped in cotton and placed in the package for use. This type of sachet or dry perfume is much more satisfactory than the powder type due to its low rate of evaporation as the wax possesses a much greater affinity for the perfume oils than the powder.

### THE BETTER POWDER GRADES

For the better powder grades a base such as powdered orris, sandal, balsam, gum benzoin or tolu is used. However, in the choice of such a base, it is necessary to be very careful in the selection of the odor as some are not at all suited to these bases. Those found to give the best results are violets and the heavier floral odors usually found in the ionones. The light gardenia, lilac and lily odors do not cover the odor of the bases or too quickly evaporate, even discoloring the mixture.

### USE OF BENZOIN OR TOLU

The use of gum benzoin or gum tolu alone as the base is impracticable due to caking properties. To obviate this kaolin is added to hold the sachet base together as well as to help retard evaporation of the perfume.

### SELECTION OF BASE

Whether the base is purely of kaolin or a mixture of various mentioned gums with kaolin depends chiefly upon the price range of the finished product. Thus the more lasting sachets, and consequently the more expensive, are those emanating from a wax base and containing a larger percentage of the natural oils.

### TEMPORARY CHARACTER

The present popularity of sachets, or dry perfumes as some call them, is merely temporary. There is nothing about them that takes the place of the refreshing note found in a liquid toilet water or perfume. There is little doubt when alcohol is again plentiful that the sachet will revert to its former scent use.

### EXPERIMENTATION

The necessity to turn to substitutes for a temporarily scarce or unobtainable article occasions experimentation that invariably carries into fields other than those at first intended. And so it has been in the developing of sachets. Other materials of which we may hear much in the future are in the development stage as a vehicle for perfumes. When these developments are perfected we will bring them to you in these pages.

## Analyses of French and Italian Jasmin Oil

THE CHARACTERISTICS of jasmin oil extracted from flowers grown in Southern Italy have recently been reported by two Swiss investigators (Y. R. Nares and A. V. Grampoloff, *Helv. chim. acta*, 1942, vol. 25, p. 1500) according to *Manufacturing Chemist*, Dec. 1943.

The flowers were extracted with light petroleum to give the concrete oil from which the absolute oil was obtained by extraction with alcohol. These oils and the volatile constituents of jasmin flowers were com-

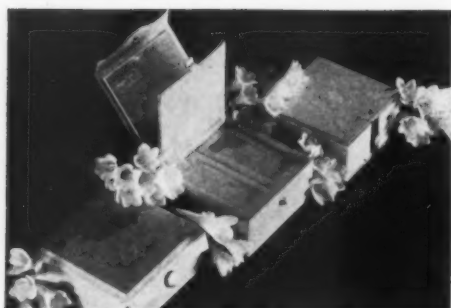
pared with the similar oil from French (Provençal) jasmin. Both contained benzyl benzoate, a component that has hitherto been overlooked, but in addition to the normal constituents of Provençal oil, the Italian product contained free benzoic acid, creosole (methyl catechol), benzaldehyde, alpha-terpineol, nerol and a large proportion of a new substance (or mixture) with the formula  $C_{15}H_{21}O$ .

A number of new derivatives were made, including:

|  |                        |
|--|------------------------|
| Creosole 2,4-dinitrophenyl ether .....   | m.p. 119-120 deg. C.   |
| Jasmone 2,4-dinitrophenylhydrazone ..... | m.p. 121-122.5 deg. C. |
| Terpineol allophanate .....              | m.p. 133-134 deg. C.   |
| Nerol allophanate .....                  | —                      |
| Geraniol allophanate .....               | m.p. 124-124.5 deg. C. |

# Packaging

## P O R T F O L I O



ELIZABETH ARDEN



CHERAMY



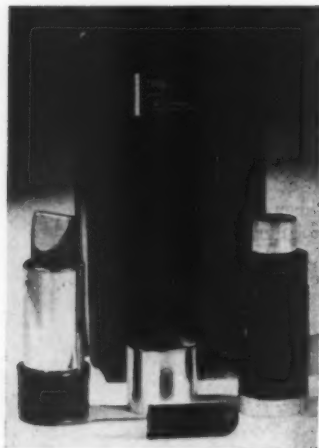
DELETTREZ



DJER-KISS



DAGGETT & RAMSDELL



TABU

ELIZABETH ARDEN: Pinker toned Cameo powders are launched in four new shades, Rose Rachel, Lysetta, Renoir Pink, Paradise Pink. Illusion powder, to be worn under Cameo, comes in Mat Fonce, Special Mat Fonce and Ivoire. Both textures of powder are individually packaged in two sizes or in the Tandem box (shown center)

CHERAMY: Cartons holding the new perfume, Frolic, are gaily decorated with festive scenes printed in soft shades of blue, green and rose on a white background. Toilet water, dusting powder and talcum powder are all available in the same fresh and sparkling fragrance. The perfume is packaged in three sizes

DELETTREZ: Foundation Film, available in 1-oz. jar only, comes in four shades, Peche, Rachel, Rose Rachel and Tropitan.

DJER-KISS: The well-known scent makes its debut in a powdered perfume version, flesh-toned in color, for application to the skin. The cap is of white plastic tied with a pink satin bow and the label is bordered by a brighter shade of pink

DAGGETT & RAMSDELL: Mountain Heather bath accessories are presented in an attractive pink and blue gift package containing a generous-sized box of bath powder with a soft puff and cologne in a "little lady" bottle. The powder box is garlanded with a white heather design

TABU: In the top of the black and silver metal lipstick case is concealed a tiny perfume vial. The combination set, available in two sizes, comes in a black heavy-papered carton containing a glass dropper to be used for refilling the vial



MILKMAID



YARDLEY



DERMETICS

MILKMAID: Handbag in black, ginger or red saddle-dye lambskin, leather lined, boasts a removable container filled with mirror, change purse and comb, plus dry rouge, lipstick, cleansing cream, Toning Milk, Milkmaid Emulsion and face powder

YARDLEY: Henna and Camomile shampoos with accompanying rinses, and Natural shampoo (used without a rinse) are lavender scented as is the non-sticky Solidified Brilliantine for grooming hair

DERMETICS: Gift carton of a month's supply of Automatic Powder Puffs. Powder held inside the puff avoids spilling

ANTOINE DE PARIS: Rose Point lipstick, a new soft rose shade of depth and brilliance in an ivory plastic swivel case



ANTOINE



JACQUELINE COCHRAN



GERMAINE MONTEIL

JACQUELINE COCHRAN: Chromablend foundation film, a powder base individually formulated by trained consultants. The jar is pale blue, capped in pink plastic

GERMAINE MONTEIL: "Laughter" Combination Gift Set combining a golden satin box of "Laughter" Dusting Powder with its lamb's wool puff and Laughter Eau de Toilette

KATHLEEN MARY QUINLAN: "Seven Q's to Beauty" kit in black, maroon, brown or red. Lined with water-repellent fabric, it contains four beauty preparations in addition to lipstick, powder and rouge

BABANI: Aïno, "Essence Russe," makes its debut in a crystal flaçon decorated with hand painted design. Topping this individualistic bottle is a gold-ball cap.



KATHLEEN MARY QUINLAN



BABANI

## Solid Perfumes a Permanent Addition

THE NEW ACCENT on products which can be made without the addition of alcohol has resulted in an increasing interest in solid perfumes. This type of perfume has not been particularly popular up to the present, although the multitude of uses to which it can be put would seem to indicate great possibilities once the market is properly explored and the public is accustomed to its use.

One of the reasons this type of perfume aroused so little enthusiasm is probably the fact that while much attention had been paid to the composition and type of perfume used, little was paid to the formulation of the base itself, and the preparations produced, whether in stick, cone or tablet form, became unsightly after short storage.

Alcoholic solutions of stearin or rosin soaps, calcium acetate dissolved in 10 to 15 per cent alcohol, gelatine mixtures, whether with or without an addition of glycerine, are for instance not suitable for the manufacture of first-class solid perfumes as the product so prepared will not retain its original shape and will soon lose any sales appeal it may have possessed when fresh.

### ACETANILID ESSENTIAL INGREDIENT

To produce a solid perfume which is to retain its shape and appearance for a reasonable length of time, acetanilid should be added and may be considered one of the most important ingredients, along with magnesium carbonate which acts as an absorbent, and a certain percentage of crystalline aromatics. To aid in removing the cones or sticks of solid perfume from the forms in which they have been allowed to cool, a small percentage of wax should be added, which at the same time gives a smooth lustrous surface. The selection of this wax is of importance. It has for instance been observed that Japan wax will produce a very thin frosted surface on the finished perfume after comparatively limited storage, while other waxes such as spermaceti and beeswax were found to be absolutely free of these defects and even upon prolonged storage no change was observed in the appearance of the outer surface. A suggested formula for a base for solid perfumes which has been tested in actual practice would for instance be the following:

|                                   |     |
|-----------------------------------|-----|
| Acetanilid                        | 142 |
| Magnesium carbonate               | 15  |
| Wax such as beeswax or spermaceti | 5   |
| Musk Xylol                        | 50  |
| Heliocrete                        | 8   |
|                                   | 220 |
| Perfume Compound                  | 18  |

The preparation itself is comparatively simple. The three first mentioned ingredients, acetanilid, magnesium carbonate and wax, are melted while stirring continuously, after which the solid aromatic chemicals, musk xylol and heliocrete, are added, which soon melt and combine with the mass. The perfume compound itself is added last and the mixture is then poured into forms. The mass will solidify very quickly. Cooling with water is not recommended, as the cones or sticks are removed while still warm. Remelting of the base and its use in the manufacture of further sticks is not recommended and therefore the batch to be made should be adjusted to exactly the quantity required for the forms to be filled, and so measured that the mixture can easily be poured throughout until all forms are filled, before it has the chance to solidify.

### EXPERIMENTAL RESULTS

Experiments have been carried out which indicate that on a batch of 220 weight units, an addition of 18 units of perfume represents the maximum quantity possible. If this quantity is exceeded, the firmness of the sticks or cones is reduced, and a tendency to sweat will furthermore be noticed, resulting in a simultaneous loss of perfuming effect. In developing a perfume compound adjusted to these particular purposes, we have found that an appreciable quantity of benzyl alcohol,

approximately one third, is necessary. It is likewise imperative that the other ingredients, no matter whether of natural origin or synthetically produced, be carefully examined as to their suitability and for their chemical reactions, etc., as well as for their physical properties, such as evaporation velocity. The correct dosage of suitably effective fixatives is very essential, as these, acting as stabilizers, are most important in developing and securing the harmonious effect of the perfume used, and particularly so in view of the fact that the perfume oil has to be added to the basic mass while hot. Although also good fixatives, the crystalline aromatics, musk xylol and heliocrete, are by no means sufficient as they will only increase the durability of the perfume's after-effect, and without the simultaneous use of odor stabilizers, the final perfume effect would be decidedly flat and insipid.

The possible use of solid perfumes is widespread and so versatile that it offers a wide field to the imagination of the enterprising manufacturer. Their use enters the growing field of perfuming stationery and other objects of personal use, of which the public is growing increasingly aware. An individual perfume which the wearer can use, not only on her person and in her cosmetics, but also in her stationery and other personal belongings may well be the custom of the future. The interest in solid perfumes caused by present scarcities may be but the forerunner of an important trend in cosmetics. — *Schimmel Briefs.*

### Toiletries Top the List for Overseas Gifts

THE VERY HIGH prices which have been charged by Indian and Egyptian sellers for toilet goods, dentifrices and cosmetics has been a source of annoyance to Scotch soldiers now serving in these areas, our Scottish correspondent, Robin Walker, states. Consequently perhaps the most welcome items in the parcels from home have been the tooth paste and shaving soap which now go regularly into many of these gift parcels.

The city of Edinburgh has raised a special fund, administered by Lady Provost under the name of the Lady Provost's Fund and from this source gifts are sent to every man from that city wherever he may be serving.

Shaving soap, tooth paste, toothbrushes and other toilet goods are included in every parcel and have been received with acclaim by Edinburgh men in the fighting forces overseas.

A reply from India this week from one Scot stated that tooth paste now costs as high as eight shillings and six pence per tube in many parts of India so that the humble tube from some British factory is a godsend to tommies. Similar reports have been received from Britons.

All prices are high in the East and supplies are very limited even in the bigger centers while in the smaller country areas, the supply of toiletry goods is almost nil.

The obvious inference is that here too, as in Europe, there exists an immense post-war market which must be given as prompt attention as conditions permit.

Although this is an article from Scotland, it also holds true that if there is a market for the Scots there is also a market for Americans.



THAT VICTORY BE OURS...

PEACE BE HASTENED...

THAT OUR BOYS RETURN SAFELY..

THAT FREEDOM AND LIBERTY BE  
THE LOT OF ALL MANKIND...

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Like the Army's famous jeep, many among today's "newcomers" born of wartime emergency, are proving themselves more versatile, and in countless cases, are performing with an efficiency far beyond what was expected of them.

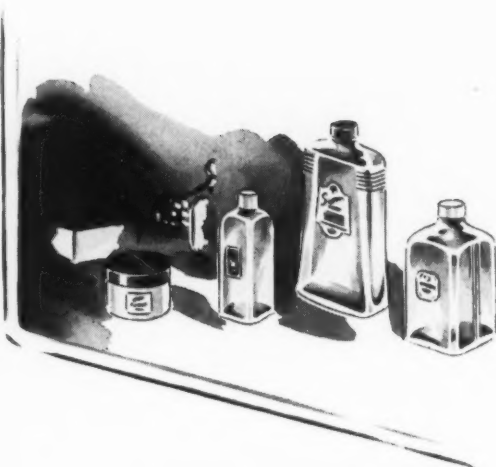
It is replacements of this caliber that Givaudan's research is hard at work developing...substitutes *plus* that give "extra value" to Givaudan's high quality standards.

All of these replacement materials are not new. Actually many of today's outstanding "pinch-hitters" are long-known, highly regarded products for which new uses have been found. But whether it be new product, or old product with new use, you can be sure that whatever Givaudan supplies will be the finest that can be produced under today's limitations...sound assurance that it pays to "Buy Wisely...Buy Givaudan."

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FURTHER CONTRIBUTION WE MAY MAKE TO PRO-  
DUCTION OF MATERIALS FOR THE WAR EFFORT



## WHOA, ROVER!

Naturally, Rover, you wouldn't understand—but your mistress' eye was caught by those gleaming, graceful Maryland Glass Bottles in the store window . . . . . Yet, smart as are the Maryland Glass designs of pre-war origin, they will be supplanted by even more alluring styles after Victory . . . . In your post-war planning, keep posted on Maryland Glass bottles and jars.

MARYLAND GLASS CORPORATION, BALTIMORE, MD. . . . New York: 270 Broadway . . . . Chicago: Berman Bros., 1501 S. Laflin St. . . . St. Louis: H. A. Baumstark, 4030 Chouteau Ave. . . . Memphis: S. Walter Scott, 435 S. Front St. . . . Kansas City, Mo.: Aller Todd, 1224 Union Ave. . . . Cincinnati: J. E. McLaughlin, 401 Lock St. . . . San Francisco: Owens-Illinois Pacific Coast Co.

## MARYLAND

*Bottles & Jars*





# lavors

## Proposed Increase in Tax on Distilled Spirits

*The present tax rate of \$2.25 per proof gallon has proven in all instances to be the rate that affords the Treasury Department the largest revenue*

ON NOVEMBER 19, the House Ways and Means Committee reported to the House of Representatives the proposed revised Revenue Bill of 1943. The bill after being considered by the House of Representatives was then referred to the Senate Finance Committee for its consideration.

This proposed bill provides for an increased tax on distilled spirits from \$6.00 to \$9.00 per proof gallon and further provides for a drawback on distilled spirits at the rate of \$5.00 on each proof gallon used in the manufacture and production of medicines, medicinal preparations, food products, flavors and flavoring extracts which are unfit for beverage purposes and which are sold or otherwise transferred for use for other than beverage purposes. This increases the tax on distilled spirits from \$2.25 to \$4.00 per proof gallon for non-beverage use.

The object, of course, of any tax bill is to raise revenue. The fact that the Treasury Department has received its greatest revenue from this source when the tax on distilled spirits used for non-beverage purposes was at the rate of \$2.25 per proof gallon—the present tax—and which was in effect during the last World War and again during 1938, is evidence that for its own interests the Treasury Department should set the drawback at \$6.25 instead of \$5.00.

When the existing bill was first proposed in 1942, various pertinent facts were pointed out to the Senate which brought about the present drawback for the flavoring industry, among which was the fact that the spirits used for

beverage purposes are measured on a proof basis, but in the manufacture of medicines and food products 190 proof alcohol must be used. Thus the tax on a gallon of alcohol in the present case—with the present drawback to \$4.00 tax—would be \$7.60 per gallon or a tax of only \$1.40 less than that required on distilled spirits used for whiskey, gin and brandy.

### INCREASED TAX = LESS REVENUE

During the years prior to the securing of the present drawback—1939 to 1942—when the industry was endeavoring to obtain a differential in the tax charged upon distilled spirits used in the manufacture of food products and medicinal preparations, the quantity of distilled spirits so used had declined. Due to military secrecy accurate figures cannot be disclosed but it is estimated that the use of alcohol in the manufacture of medicinal preparations, flavoring extracts, fruits and flavoring syrups and domestic preservative preparations had declined between 50 and 60 per cent, with an obvious resultant loss in revenue.

It is probable that in the present instance the Treasury may make the same objections to an increased drawback as it did in 1942; that the tax is being passed on to the consumer. But this is not the case, with a very few possible exceptions.

In the case of medicinal preparations, the law prohibits an increase in the sales price of a product which has been sold at an established price for several years. Not only this, but the manufac-

turer has had to absorb increases in other materials, labor costs, etc., and price ceilings do not permit him to raise his price.

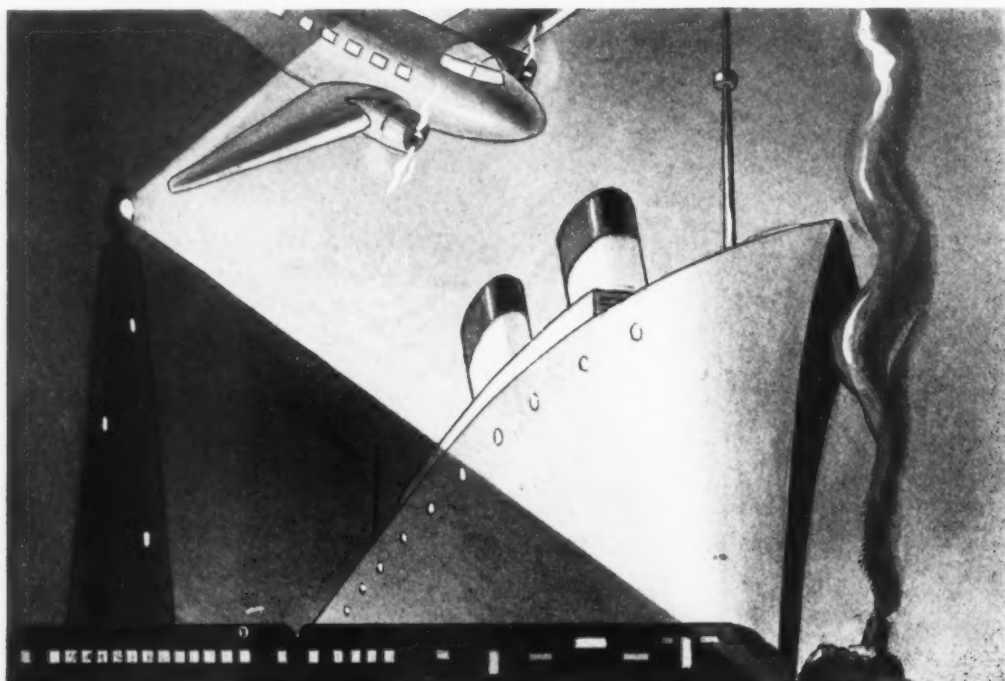
In the case of the flavoring extracts and fruit preservatives manufacturer, he finds himself able to pass on the tax to less than 50 per cent of his customers. The large percentage of his business is with the manufacturing wholesalers of ice cream, bakers and confectioners. To increase the price to this group would force them to resort to substitutes with the consequent loss of business.

### AN ESSENTIAL INDUSTRY

Furthermore, this industry which is fighting for its rights, and they are rights, is an essential industry. Essential food products, such as food flavors, must be made available at the lowest possible cost consistent with compliance with the Federal and State Food, Drug and Cosmetic Acts, as one of the means to hold prices down. Medicines, and medicinal preparations for the preservation of public health likewise must be made available at the lowest possible cost consistent with the above mentioned Acts. No one will dispute that both these products fall into the category of "essentials" and consequently should be widely differentiated from luxury items, such as whiskey, gin and brandy used for beverage purposes.

Every country in the world recognizes this differential and in most cases makes adequate provision for it. For example, Canada, under present war conditions, imposes a tax of only 21.47

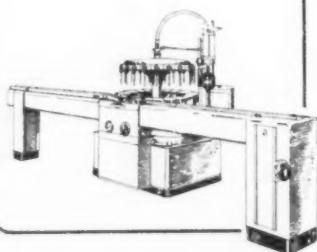
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per cent of that on alcohol used for beverage purposes; not the 44.4 per cent proposed in the pending bill.

#### PRESENT RATE COVERS COSTS

The present rate of taxation has proven more than sufficient to cover the cost of administration by the Treasury. The excise tax plus the special tax levied for permission to make application for the drawback—\$25 per annum up to use of 25 proof gallons; \$50 per annum up to 50 proof gallons; and \$100 for total annual withdrawals of 50 proof gallons or more—more than covers the cost of operation and affords the Treasury Department the greatest return from the industry than at any other rate. When Congress awakens to this reality there should be little difficulty in securing the \$6.25 drawback.

### Grape Seeds as a Source of Oil

Grape seeds are now being used extensively in Europe as a source of oil, according to *Chemist and Druggist*.

This oil has proved to be usable not only for soap and varnish manufacture, but has also been found suitable for edible purposes.

The leading grape-growing and wine-producing countries of Europe, in particular, Italy, France and Greece, have long obtained oil from this source and since the war Germany is said to have been developing the processing of grape seeds to such an extent that an annual production of 1500 metric tons was last reported as expected. Italy was reported to expect an annual production of some 10,000 tons of oil from grape seeds.

There are two methods used to process and extract the oil, either with petroleum or with trichlor-ethylene. The whole oil obtained by warm pressing or second pressing is used in making soap and varnish.

#### Ways to Save Paper

Paper is needed in ever-increasing quantities by our armed forces. The paper you save goes to them. Here's how you do it:

Make each piece of writing paper do its full duty; stretch every inch of wrapping paper by carrying small items unwrapped in your bag.

Cheerfully accept the manufacturer's war packaging as he simplifies his boxes and cartons to save paper.

Save every bit of used paper for your local salvage drive.

## G. H. Burnett Reports to Senate Finance Committee

ON DECEMBER 3, 1943, George H. Burnett, treasurer of Joseph Burnett Co., Boston, Mass., appeared before the Senate Finance Committee on behalf of the Flavoring Products Industry and registered a protest against proposed changes recommended by the House Ways and Means Committee as contained in H.R. 3687, Section 309 (b). His protest follows:

"I am here to speak to you on behalf of the change in Section 309(b) Drawback on Internal Revenue taxes on Distilled Spirits of H.R. 3687. The proposed measure calls for a tax of \$9.00 a proof gallon or \$17.10 per actual gallon on distilled spirits which includes ethyl alcohol. If this alcohol is used in the manufacture or production of medicines, medicinal preparations, food products, flavors or flavoring extracts unfit for intoxicating beverage purposes, a drawback is provided of \$5.00 a proof gallon, or \$9.50 per actual gallon, making a net tax of \$4.00 a proof gallon or \$7.60 per actual gallon, as compared with the present net tax of \$2.25 a proof gallon or \$4.27½ per actual gallon.

"Practically all member companies of the foregoing associations are vitally interested in the present and proposed tax on distilled spirits due to the fact that they use ethyl alcohol in the manufacture of aforesaid food products and medicinal preparations. Every member company is aware of the difficulties attendant upon taxation generally and keenly alive to the need for increased Federal revenue. In the case of most of the member companies they would prefer to continue to use ethyl alcohol as a solvent or preservative instead of resorting to a substitute, thereby making a better product and producing revenue for the Government.

"Under the regulations of the Alcohol Tax Unit, in accordance with the provisions of the Revenue Bill of 1942, each manufacturer must pay an occupational tax of \$25.00, \$50.00 or \$100.00 per annum to be eligible for the privilege of drawback. When the alcohol is purchased the present Internal Revenue tax of \$6.00 per proof gallon, or \$11.40 per actual gallon must be paid prior to withdrawal. Accurate records must be kept showing alcohol purchased, its use, etc. Finally it must be proved to the Treasury Department that the finished product containing the alcohol has been sold or otherwise transferred for other than beverage purposes. Only then can a claim for drawback be made, which claim is submitted at the end of each three months next succeeding the quarter for which the drawback is claimed. The claim

is filed with the local Collector of Internal Revenue, where a record is made of it. It is then turned over to the local office of the Alcohol Tax Unit and checked by the District Supervisor, who examines the books and records of the manufacturer, rechecked by the Alcohol Tax Unit in Washington and rechecked again by the General Accounting Office. It is then turned over to the Local Collector of Internal Revenue for payment. With all these safeguards, no loss in revenue can be incurred by the Treasury Department by diversion of alcohol to intoxicating beverage purposes.

"We have not had quite a year's experience in the filing of drawback claims. We have no complaint with the cooperation received from the Bureau of Internal Revenue, for these drawback claims were new to the industry and new to the Bureau, but the fact remains that nine months to a year lapse before we receive our drawback money. This means then that we pay our occupational tax of \$100.00 per annum and approximately 55c. for a gallon of alcohol, an Internal Revenue tax of \$11.40 on each actual gallon of alcohol, and then fabricate our product. After keeping all required records, selling the product and waiting for the end of each three month period, we are privileged to file our claim for drawback, and then wait months for a refund check. But we anticipate and hope that as the drawback system becomes more familiar to us and to the Bureau of Internal Revenue unusual delays will be eliminated.

"Just a little over a year ago we paid a net tax of \$4.00 a proof gallon, or \$7.60 per actual gallon on ethyl alcohol purchased, at which time we pointed out to this committee the inequity in such a tax rate on a commodity becoming a part of an essential and necessary food or medicinal product. We also pointed out the fact, which is a matter of importance today, that the Treasury Department derived its greatest revenue from beverage alcohol when the tax was \$2.25 a proof gallon or \$4.27½ per actual gallon. That any such increase over this net rate resulted in decreased revenues to the Treasury, caused either by the use of a substitute for ethyl alcohol whenever and wherever possible and the fact that many manufacturers were compelled to discontinue the production of certain alcoholic items. All these reasons caused the Senate to grant us the lower tax base, effective November 1, 1942.

"What was true one year ago is true today, and with greater emphasis. The

# C.A.P.P.



## Compagnie Africaine des Plantes à Parfum CASABLANCA, MOROCCO

**T**HE possibility that African ports may be shortly opened to American commerce makes C. A. P. P. once again of great interest to American consumers of essential oils and perfume materials.

This company is established in various parts of Africa with large plantations and modern distilling and extracting plants. Laboratories and plantations are at Meknes and Marrakech (Morocco), Labbé-Nadel (French Guinea) and Nossi-Bé (Reunion).

Products of C. A. P. P. are:—

|                         |           |  |
|-------------------------|-----------|--|
| <b>ABSOLUTES</b>        | . . . . . | Karo Karounde, Oak Moss, Mimosa, Rose Morocco, Ylang Ylang Nossi-Bé.   |
| <b>OILS</b>             | . . . . . | Basil, Chamomile Morocco, Cedrus Atlantica, Geranium Morocco, Petitgrain French Guinea, Bigarade, Lemon; Sweet Orange French Guinea; Ylang Ylang Nossi-Bé. |
| <b>TERPENELESS OILS</b> | . . . . . | Cedrus Atlantica, Lemon, Sweet Orange.   |

## NAUGATUCK AROMATICS

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action of this Committee a year ago gave to that segment of the food and medicinal industry using pure ethyl alcohol an opportunity to add to the Federal income, and at the same time pass along the saving to the consumer. Similar action is sought today, and we hope the Committee will provide for sufficient amount of drawback so as to make the net tax on non-beverage alcohol not more than \$2.25 a proof gallon, or \$4.27½ per actual gallon, the present net tax.

"Your Committee has heretofore distinguished between ethyl alcohol used for the manufacture of food, medicines and flavoring extracts, essential and necessary uses, as compared with intoxicating beverage use, etc., luxury use. Unfortunately for the non-intoxicating beverage using industries, the Ways and Means Committee is considering excise taxes as a whole lost sight of our problem in the mass of detail to be considered. The House report states that a most productive source of revenue is increased excise taxes, and "by this method it is possible to select those goods which are clearly luxuries and tax them at a rate in accord with the particular market situation." We respectfully submit that food products and medicines do not fall in that class designated as 'clearly luxuries'.

"We are only now beginning to catch our breath after a painful struggle to operate under the present tax rate of \$4.00 a proof gallon, or \$7.60 per actual gallon, on non-beverage alcohol. The net rate of \$2.25 a proof gallon, or \$4.27½ per actual gallon, which we now pay, has been the salvation of our business. Any increase in this net rate will prove detrimental to the Treasury and to the non-intoxicating beverage using industries alike. We hope, therefore, the Committee will amend the House Bill 3687 and increase the amount of drawback on non-beverage alcohol so as to provide a net tax of not more than \$2.25 a proof gallon, or \$4.27½ per actual gallon, and continue in effect the current tax."

As we go to press we note that the Senate has increased drawback to \$6.

### Peppermint Discussion

The long awaited order on peppermint oil is still under discussion. This time it is the lawyers of the WFA who are holding up proceedings. It was expected that the order would be out by Dec. 1st, but as we go to press it seems that it will probably be another two to three weeks before an agreement on all points can be worked out.

WPB officials have requested that pharmaceuticals uses be granted 100

per cent quotas and dentifrices receive five per cent above all other uses. The former will undoubtedly be granted but the latter may cause dissatisfaction on the part of the food people, with resultant delaying discussions. If the controversy can't be solved in any other manner, it may be put up to Civilian Requirements Div. WFA and WPB.

### Ceiling Prices on Citrus Fruits

AS PART OF THE Office of Price Administration's program for rolling back the cost of fresh fruits and vegetables, Price Administrator Bowles announced recently that retail ceilings for the citrus fruit crop coming to market would be reduced by from 10 to 15 per cent compared with prices in the 1942-1943 season. At the same time, growers will be allowed a return somewhat higher than last season.

The national average retail ceiling for oranges will be 9.5 cents a pound, a reduction of 1.5 a pound from last season. For grapefruit the national average will be eight cents a pound, a reduction of one cent, and for lemons 13.5, a reduction of 1.5 cents. These ceilings will be provided in a forthcoming regulation and will reflect the following returns per box for the grower for fruit on the tree:

|                                   | NEW<br>CEILINGS | LAST<br>YEAR |
|-----------------------------------|-----------------|--------------|
| Florida and Texas oranges         | \$2.41          | \$2.13       |
| California and Arizona oranges    | 2.85            | 2.63         |
| Florida and Texas grapefruit      | 1.64            | 1.54         |
| California and Arizona grapefruit | 1.95            | 1.67         |
| All lemons                        | 3.28            | 3.03         |

The new regulation will set the maximum mark-up for wholesalers in terms of dollars and cents per box. This will replace the method used last season where the maximum mark-up was expressed as a percentage over cost, and will prevent the pyramiding of margins. At the same time the new margins will be held more nearly in line with those customarily prevailing in the trade prior to price control.

Retail ceilings will be expressed in terms of cents per pound rather than cents per dozen. This will simplify the price regulation and provide full protection to the consumer according to C. P. A. Dealers may, of course, express their ceilings in cents per dozen providing that this price is not higher than the maximum allowed for a dozen oranges of that particular size under the price per pound basis.

The new retail ceilings will be based on additions of the following specific allowance per box in the handling of

fruit from the orchard to the retail store:

|                           | ORANGES | GRAPE<br>FRUIT | LEMONS |
|---------------------------|---------|----------------|--------|
| Pick, pack and sell       | \$1.20  | \$1.05         | \$2.10 |
| Freight and refrigeration | 1.05    | 1.00           | 1.35   |
| Wholesaler's mark-up      | .75     | .65            | .90    |
| Retailer's mark-up        | 1.75    | 1.35           | 2.50   |

No subsidy is involved in this program. This announcement by OPA was made after a full and complete discussion with representatives of the industry and of the War Food Administration, all under the supervision of the Director of Economic Stabilization. The latter, Judge Fred Vinson, gave his full approval to the plan and instructed full cooperation of OPA and WFA to carry it out.

Specifically, after telling of the pricing pattern, Judge Vinson directed that, if it should appear that the existing distributive system is being circumvented by direct buying or other devices, WFA should be prepared to issue mandatory orders or develop a licensing plan for shippers to prevent circumvention or evasion or disruption of the present distributive system. He also told the two agencies that he desired the public to know that fair returns to the growers will be obtained under the basing point pricing system and that retail prices would be announced on a marketing area basis by district offices of the Office of Price Administration.

### Drug Sugar-Fats-Oils Users to Re-register

All drug users of rationed foods—sugar, fats-oils—will have to re-register with their local boards between Dec. 15 and Jan. 5. The re-registration is purely mechanical in an effort to simplify and streamline the procedure whereby industrial users get rationed foods and will in no way effect quotas of sugar, or other rationed products used by drug manufacturers.

A manufacturer who has several plants may register all in one or by separate plants, but it is better to do the latter and then interchange points or allotments after registration is completed.

The purpose of this re-registration is to provide one form on which all industrial users can get all of their allotments in a unit. It will also do away with much record keeping and accounting if the allotments periods all coincide with one another, so that the fats-oils allotments falls in the same calendar quarter as does the allotment period for sugar, etc.

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They are soundly constructed of a variety of aromatic bodies and brilliantly worked out to provide the best possible base for any type of compound.

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### Osmodor Bigarone

Penetrating, lasting orange blossom base. Also recommended for modern eaux de cologne.

### Osmodor Bulgaryl

Of aldehyde-like character. For rose compositions and for flowery effects.

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An effective and lasting musk base. Use a 3% solution as substitution for natural tincture of musk.

### Osmodor Carnatine

A carnation base of unusually delicate yet penetrating character. Very valuable in all floral bouquets.

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Incorporates the delicate fragrance of forest herbs and field flowers. Most effective in dilution. Useful in perfumes of all types.

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Suggests Russian leather. Suitable in sultry modern compositions and in eaux de cologne.

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A very efficacious rose base of great strength, imparting the dewy character of freshly picked blossoms.

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## Solid Soap Phases\*

*The second half of a study of the four important existing separate crystalline phases in sodium soap which give rise to different properties when present in solid commercial soaps*

by R. H. FERGUSON, F. B. ROSEVEAR and R. C. STILLMAN

The Procter & Gamble Company, Ivorydale, Ohio

SINCE THE identification of the solid phases hinges on the presence in an X-ray pattern of certain characteristic short spacing rings, Table II presents all the short spacings of the four known sodium soap structures. Of these four, only the alpha and beta structures have been reported in the literature.<sup>1, 10, 14, 15</sup> Establishment of omega and delta as distinct soap structures will be considered later. The spacings that have been found reliable as criteria of the presence of a particular phase are marked  $\alpha$  in Table II and shown separately in Table I.

### BETA PHASE SPACINGS

Since our identifying spacing for the beta phase is not found among the beta spacings of Thiessen and Stauff who announced this phase, it is necessary to justify our use of it. Actually we are in almost complete disagreement with Thiessen regarding the beta short spacings; we regard Thiessen's numerical data as inconsistent with his own published patterns. This was shown by (a) measuring the lines on his Figure 12;<sup>14</sup> (b) calculating a hypothetical "camera

<sup>1</sup>Since this paper was originally submitted, McBain and de Bretteville [Science, 96, 470 (1942)] have announced a gamma modification of sodium stearate. Although they have so far quoted only a single long spacing value to characterize their gamma form, this value (44.6 Å) and the history of their sample indicate that their gamma and our omega (44.4 Å) modifications are identical.

\*Reprinted from *Industrial and Engineering Chemistry—Industrial Edition*—Sept. 1943, pp. 1095 to 1012.

Table IV. Comparison of Beta Data with Those of Thiessen

| 1<br>BETA NA<br>PALMITATE <sup>d</sup> |    | 2<br>BETA NA<br>STEARATE <sup>d</sup> |    | 3<br>BETA NA<br>STEARATE <sup>b</sup> |     | 4<br>BETA NA<br>STEARATE <sup>d</sup> |       | 5<br>BETA NA<br>PALMITATE <sup>d</sup> |       |      |
|--|----|---------------------------------------|----|---------------------------------------|-----|---------------------------------------|-------|--|-------|------|
| d/n                                    | I* | d/l                                   | I* | d/n                                   | I** | hkl                                   | d/n   | I***                                   | d/n   | I*** |
| 1.78                                   | VW | .....                                 | .. | 1.31                                  | M   | 040                                   | ..... | ..                                     | ..... | ..   |
| .....                                  | .. | .....                                 | .. | 1.67                                  | M   | 220                                   | ..... | ..                                     | ..... | ..   |
| 2.35                                   | W  | .....                                 | .. | 1.75                                  | S   | 400                                   | 1.78  | M                                      | ..... | ..   |
| 2.47                                   | VW | .....                                 | .. | 2.13                                  | W   | 310                                   | ..... | ..                                     | ..... | ..   |
| 2.63                                   | VW | .....                                 | .. | 2.46                                  | {VW | 206}                                  | 2.30  | VW                                     | ..... | ..   |
| .....                                  | .. | .....                                 | .. | .....                                 | ..  | 023}                                  | ..... | ..                                     | ..... | ..   |
| 2.80                                   | M  | 2.78                                  | M  | 2.64                                  | S   | 020                                   | ..... | ..                                     | ..... | ..   |
| 3.13                                   | M  | 3.18                                  | M  | .....                                 | ..  | .....                                 | 2.78  | M                                      | 2.76  | M    |
| .....                                  | .. | .....                                 | .. | .....                                 | ..  | .....                                 | 3.15  | M                                      | 3.19  | M    |
| 3.85                                   | S  | 3.85                                  | S  | 3.37                                  | {W  | 203}                                  | ..... | ..                                     | ..... | ..   |
| 4.28                                   | S  | 4.30                                  | S  | .....                                 | ..  | 205}                                  | ..... | ..                                     | ..... | ..   |
| .....                                  | .. | .....                                 | .. | 3.45                                  | VS  | 200                                   | 3.90  | S                                      | 3.88  | S    |
| .....                                  | .. | .....                                 | .. | 4.21                                  | VS  | 110                                   | 4.28  | S                                      | 4.28  | S    |

<sup>a</sup> Authors' data.

<sup>b</sup> Calculated from  $\sin^2\theta$  values of Thiessen and Stauff.<sup>14</sup>

<sup>c</sup> Calculated from Figure 12 of Thiessen and Stauff.<sup>14</sup>

<sup>d</sup> Calculated from Figure 5 of Thiessen and Ehrlich<sup>14</sup> by taking as a standard the inner of the two strong reflections (4.28 Å); it is this reflection for which Thiessen's numerical data (column 3) come closest to agreement with ours.

\* Our intensity ratings on ring patterns. (Comparison of spot and ring patterns should not be expected to produce too close checks.)

\*\* Thiessen's intensity ratings on a spot pattern.

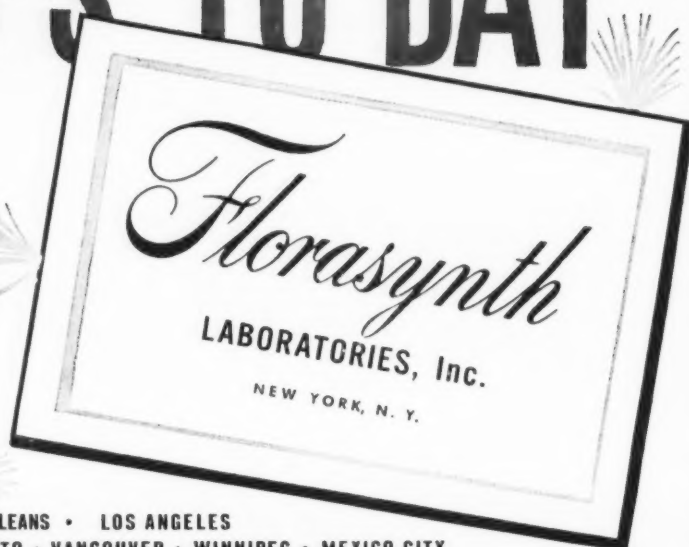
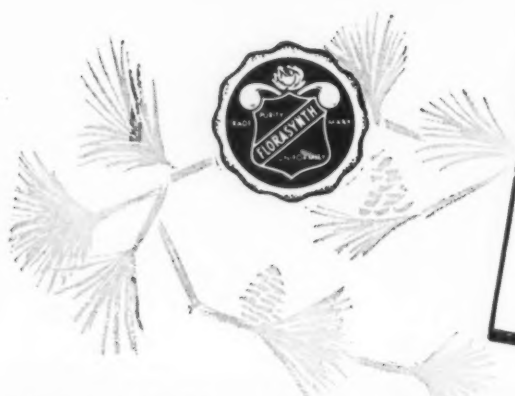
\*\*\* Our intensity ratings on published pattern.

radius," assuming a value 4.28 Å. for the innermost strong short spacing (the only spacing on which we and Thiessen agree—4.28 compared to 4.21 Å.); and (c) reversing this calculation by using the computed camera radius to obtain the other spacings. Although Thiessen does not state the wave length of his radiation, step (b) of our calculation can be made by assuming any wave length, since wave length and hypothetical radius are interdependent and lead to the same set of derived spacings. This comparison is shown in Table IV (column 3 with columns 4-5), where it

is also shown that our data for sodium palmitate and stearate (columns 1-2) are in close agreement with the values derived from his published patterns. Whatever the explanation, it is evident that there is an error in his paper. Since the matter will be considered in greater detail in a subsequent paper, we will merely state here that it is our own beta data which appear in the four-phase comparison of Table II and from which we have selected the identifying spacing.

The results in Table IV further demonstrate the constancy of short

# FOR A MERRIER CHRISTMAS IN 1944 BUY U.S. WAR BONDS AND STAMPS TO-DAY



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spacings in spite of the difference in chain length between sodium palmitate and stearate. Table V and VI and Figure 3 show the constancy of the important beta spacings for soaps of widely varying composition. The three commercial soaps of Table V vary in tallow and coconut content, and soap C contains some potash soap. The moisture contents vary somewhat also, yet the phase identification in terms of beta content is specific and may be made fairly quantitative by proceeding according to the method stated earlier in this paper.

#### IDENTIFICATION SPACING

The short spacings used for the identification of the beta, omega and delta structures are shown in Table VI to be independent of the moisture of the soap systems. In respect to the beta long spacings we are in good agreement with Thiessen and Stauff for both sodium palmitate and stearate. The long spacings serve as a further means of identifying beta phase although they are a much less useful tool than short spacings since long spacings vary with composition, which must therefore be known, and since they are represented by X-ray reflections close to the central undiffracted beam and are therefore less subject to precise determination than the short spacings. (In Figure 2 the long spacings are represented by the group of rings closest to the center of the pattern.)

The long spacings of the four sodium soap structures are summarized in Table VII. For a given soap the beta spacings differ from both omega and delta spacings, and all three are distinctly less than the alpha long spacings.

This decreased long spacing as we pass from the alpha to the beta, omega and delta structures is due to inclination of the soap molecules to the basal planes containing the sodium atoms. The angle of tilt serves as a further distinction between the four structures, a distinction dependent on long spacings but more apparent because of the constancy of angle for a given phase. Table VIII shows that each phase exhibits a constant angle of tilt—90 deg. for alpha, 63 deg. for beta and 60 deg. for omega and delta. Short spacings must be invoked to distinguish the latter two phases from each other, but the angle of tilt serves as a useful further item in the establishment of omega and delta as new phases.

#### BETA PHASE PROPERTIES IN SOAP

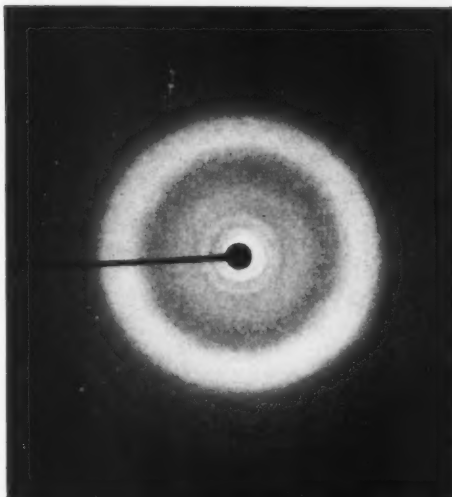
The beta phase is able to exist in translucent form and lends a degree of transparency to soap when produced under conditions tending to orient and press together the crystals. A soap made up of beta crystals in such a condition is very firm, has an easier lathering ability and takes up water when immersed to form a soft layer on the surface of the bar (Table III and Figure 5). If the beta phase is produced under conditions where the crystals are small and not joined coherently, the ease of lather is retained but the bar tends to disintegrate in water and is in general far less firm.

#### OMEGA PHASE

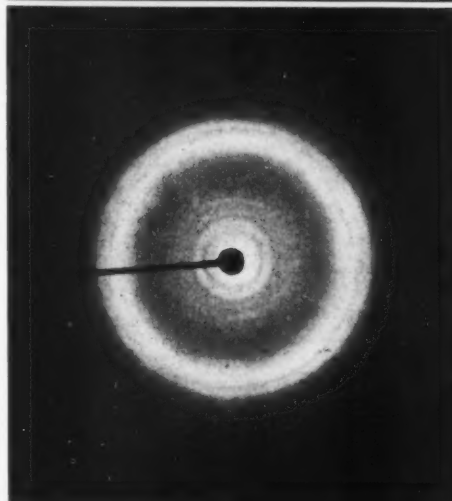
Omega phase occurs in commercial framed and in most milled soaps, the proportion present depending on temperature, moisture, stock composition and other processing conditions. It is the phase ordinarily obtained by rapidly chilling neat soap without agitation and always tends to form when low-moisture soaps of usual formulas are quietly cooled from a molten condition. In general, formation of omega is favored by higher temperatures, lower moistures and lower molecular weights. In coconut oil soap it is the predominant phase and converts to beta with difficulty. In commercial sodium oleate soap it is perhaps the only stable form any sodium soap structures other than alpha and beta (see footnote<sup>1</sup>). In fact, much of the evidence we now consider as applying to the omega structure has been mistakenly attributed to beta.

It is thus necessary for us to establish omega as a separate structure. Examination of Figure 1 and the short spacing data of Table II shows the differences between omega and the other three phases in respect to short spacings and intensity, which establish omega as a separate structure. In addition the long spacings

Sample A



Sample D



Sample F

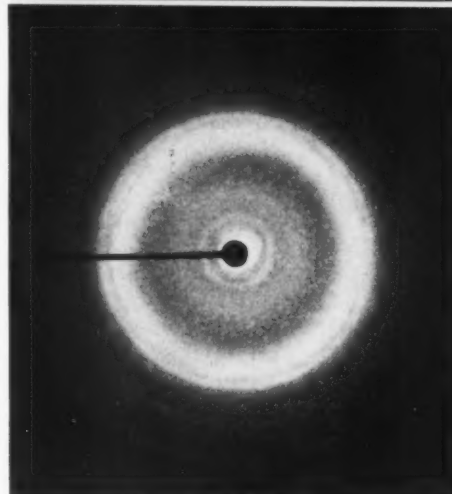


Figure 4.—Change in phase composition in soap produced under different temperature conditions. (Turn to page 71.) See Table IX—Comparison of Properties of a Soap Prepared with Varying Amounts of Beta and Omega Phases. Beta phase is able to exist in translucent form while omega occurs in commercial framed and in most milled soaps varying with conditions.



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of omega sodium palmitate and stearate (Table VII), as well as the derived angle of tilt (Table VIII), present still further distinctions from the hitherto recognized alpha and beta structures. The designation "omega" was chosen in order to follow the Greek letter nomenclature of Thiessen and Stauff; the shift to the far end of the alphabet was motivated by a wish to avoid implying an analogy to gamma triglycerides and other long-chain structures. At the time omega was established the fourth phase, since named "delta," was not recognized.

X-ray information supplementing actual quotation of spacings is furnished by following the solid transformation of the beta to the omega structure or vice-versa. In the case of progressive conversion of omega to beta by successive millings or ploddings, or in the reverse case of gradual conversion of beta to omega by heating, the diffraction rings of the new phase appear faintly at first and then become stronger and stronger, while the rings of the phase being eliminated weaken gradually until completely absent. Figure 4 and Table IX show the accompanying property changes. In all cases, however, the ring diameters are fixed regardless of intensity, indicating that the omega structure is not just a variation of the beta but is truly distinct. Such changes, followed in hundreds of examples, are illustrated in soap milling and similar practices.

As will be indicated in the section on Delta Phase, a similar gradation of relative proportions without change in spacing occurs in transformation to or from the delta structure.

**Table V.—Comparison of Four Strongest Beta Spacings in Three Typical Commercial Soaps of Widely Different Formula with Those of Hydrous Sodium Palmitate (See Figure 3)**

| SOAP                                     | FOUR STRONGEST BETA SHORT SPACINGS <sup>a</sup> |      |      |      |
|--|---|------|------|------|
|  | $d/n, \text{\AA}^\circ$                         |      |      |      |
| Hydrous Na palmitate                     | 2.75 <sup>b</sup>                               | 3.18 | 3.90 | 4.32 |
| Commercial soap A (20% H <sub>2</sub> O) | 2.75 <sup>b</sup>                               | 3.18 | 3.95 | 4.40 |
| Commercial soap B (14% H <sub>2</sub> O) | 2.75 <sup>b</sup>                               | 3.20 | 4.00 | 4.43 |
| Commercial soap C (19% H <sub>2</sub> O) | 2.75 <sup>b</sup>                               | 3.20 | 4.00 | 4.40 |

<sup>a</sup> It is recognized that the values for soaps A, B and C run slightly higher than those of the hydrous sodium palmitate for the 3.18, 3.90 and 4.32  $\text{\AA}^\circ$  spacings, but it is important that all four soaps show strict agreement for the 2.75  $\text{\AA}^\circ$  spacing which we have chosen for the detection of beta phase. It is likewise recognized that there is a somewhat greater difference in identifying spacing between the typical commercial soaps and anhydrous sodium palmitate (Table II), but these all represent minor structure variations compared with the spacing and intensity differences used to distinguish between the four established phases and do not in any way restrict the validity of the beta identification procedure.

<sup>b</sup> The beta identification ring.

In addition to the diffraction data other physical properties substantiate the individuality of the omega structure. In numerous commercial soaps dilatometer curves on material exhibiting the beta pattern in the original sample before the initial heating and the omega pattern on cooling from high temperature show that the beta soap has a higher density than the

omega. The initial beta dilatometer curve lies entirely to the higher density side of the second omega curve until the two curves finally join close to the temperature at which X-ray patterns at elevated temperatures show transition from beta to omega structure. It can also be demonstrated for certain commercial soaps, in which both beta and omega phases can be obtained at a given moisture content, that the two phases differ in temperature of complete melting to neat soap by two to three deg. C., as determined by dilatometer runs.

#### DIFFERENCE OF BETA AND OMEGA

The striking difference of beta and omega with respect to their behavior in water is shown in Figure 5 where a bar of a commercial soap consisting largely of beta phase is compared with a bar of the same soap converted to omega. Although these bars are identical in fat formula and moisture composition, they possess radically different properties by reason of the phase change they have undergone.

In view of our X-ray and dilatometric detection of a waxy phase above omega phase in commercial soaps of sufficiently low moisture content, it is well to state here that both sub-waxy and waxy phases show a pattern consisting of sharp, long spacing reflections, a strong, broad, blurred short spacing reflection at about 4.5  $\text{\AA}^\circ$ , and a similar but weaker reflection at about 3  $\text{\AA}^\circ$ . (the position of the identifying omega ring). This pattern has been established on anhydrous sodium palmitate in the regions to which the original terms "waxy" and "sub-waxy" were applied.

tinguished from the waxy phases by the absence of the 3  $\text{\AA}^\circ$  short spacing reflection in the neat pattern.

#### DELTA PHASE

There is no recognition of the delta structure as such in the literature. There are, however, two bits of published evidence which can be applied to a consideration of delta. One of these is a reproduction of Brill's Figure 3<sup>1</sup> which we consider to be delta. The pattern shows the important short spacings of delta phase although the values quoted for the two strongest rings are not in very good agreement with our data. However, this is certainly a delta pattern since the sample was obtained by drying a crystallized nigre (seven per cent soap) of commercial sodium stearate, and experience has shown that crystallized and dried niges of both pure sodium stearate and high-tallow commercial soap contain delta phase. The long spacing quoted by Brill for this preparation is 43  $\text{\AA}^\circ$ , which would correspond to a delta soap with an average chain length of about 17 carbon atoms. Aside from the Brill pattern there is one other possible description that might refer to delta, the single long spacing value of Piper and Grindley for sodium stearate<sup>8</sup>.

**Table VI.—Constancy of Phase Identification Spacings with Moisture Variation**

| PHASE | SOAP         | PER CENT H <sub>2</sub> O | SPACING, $\text{\AA}^\circ$ |
|-------|--------------|---------------------------|-----------------------------|
| Beta  | Na palmitate | 3                         | 2.74                        |
|       |              | 8.5                       | 2.74                        |
|       |              | 15.1                      | 2.74                        |
|       |              | 30-40                     | 2.78                        |
|       |              | 58                        | 2.74                        |
|       |              | 85                        | 2.76                        |
|       |              | 95                        | 2.76                        |
|       |              | 80 tallow-20 coconut      | 6.3                         |
|       |              | 20                        | 2.74                        |
|       |              | 27                        | 2.76                        |
| Delta | Na palmitate | 46 <sup>a</sup>           | 2.74                        |
|       |              | 0                         | 2.85, 3.52                  |
|       |              | 30-40                     | 2.85, 3.52                  |
|       |              | 58                        | 2.89, 3.58                  |
|       |              | 85                        | 2.87, 3.52                  |
|       |              | 95                        | 3.55                        |
|       |              | 80 tallow-20 coconut      | <15                         |
|       |              | 24                        | 2.87, 3.55                  |
|       |              | 46                        | 3.55                        |
|       |              | 60                        | 3.55                        |
| Omega | Na laurate   | 73                        | 3.55                        |
|       |              | 80                        | 2.85, 3.55                  |
|       |              | 90                        | 2.85, 3.55                  |
|       |              | 0                         | 2.96                        |
|       |              | 22                        | 2.96                        |
|       |              | 80                        | 2.94                        |
|       |              | 80 tallow-20 coconut      | 0                           |
|       |              | 17                        | 2.93                        |
|       |              | 26.4                      | 2.96                        |
|       |              | 32.8 <sup>a</sup>         | 2.96                        |

<sup>a</sup> At moistures much higher than this value, the phase concerned does not exist in soaps of this stock.

In neither case, of course, was there any realization that a separate phase was involved. As a matter of fact, Brill's discussion indicates that he considered his stearate to be equivalent in structure to the C<sub>16</sub> to C<sub>18</sub> soap of

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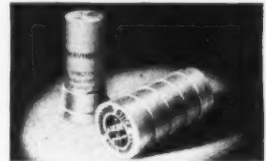


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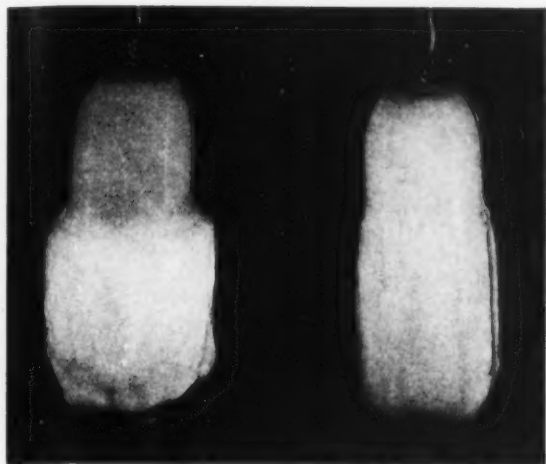


Figure 5.—Commercial soap in beta phase (left) and in omega phase (right) after soaking in water at 80 deg. F. for 16 hours

Thiessen and Spychalski<sup>12</sup> which we believe can be referred to omega phase.

That the delta pattern represents a single phase and not a mixture of phases is shown by the fact that the same pattern is obtained not only in sodium stearate, palmitate and myristate, but also in the sodium soaps of many commercial stocks—e. g., straight tallow, 80 tallow-20 coconut and 50 tallow-50 coconut. Among these soaps a variety of treatments is represented in our experience, including normal cooling, ice quenching and deformation by orifice extrusion. The chance that this assortment of stocks and treatments would lead to exactly the same mixture of phases is very small so that the delta pattern undoubtedly represents a single phase.

Distinction between the delta structure and the three other sodium soap structures is shown for short spacings in Table II and for long spacings (and angle of tilt) in Tables VII and VIII.

Table VII—Long Spacings of Alpha, Beta, Omega and Delta Sodium Soaps

| SOAP         | LONG SPACINGS, Å <sup>a</sup> |      |                   |       |
|--------------|-------------------------------|------|-------------------|-------|
|              | ALPHA                         | BETA | OMEGA             | DELTA |
| Na laurate   | ...                           | ...  | 31.5              | ...   |
| Na myristate | ...                           | ...  | 36.2              | 36.5  |
| Na palmitate | 46.6                          | 42.1 | 39.6              | 40.6  |
| Na stearate  | 51.4                          | 45.8 | 44.4 <sup>a</sup> | 45.0  |

<sup>a</sup> See footnote 1.

Figure 1 shows the short spacing distinctions graphically by means of a quadrant comparison; Figure 2 shows the long spacing distinctions. The differences in spacings, though small in some cases, are sufficient to allow resolution of the identifying rings in powder patterns taken at five cm. sample-to-film distance on a flat film.

#### DEMONSTRATION OF CONVERSION

Advantage has been taken of this resolution to demonstrate directly the

spontaneous conversion of alpha beta and omega phases to delta in sodium palmitate systems of high water content. Mechanical mixtures of each starting phase were made with 90, 80, 70, 60 and 50 per cent water. These systems were set aside at room temperature and sampled over a period of months. For each case, alpha, beta and omega over the period of sampling the original rings were seen to fade gradually while

the characteristic delta rings gained in intensity. All this was accomplished without any variation in the diameters of any one of the rings, an indication of the absence of solid solution influences and incidentally, the independence of the spacings of total water content.

state, palmitate and stearate lie close to their average although the delta values tend to be higher. It appears, therefore, that delta and omega phases have practically the same long spacing and angle of tilt, their differences being in cross-sectional arrangement.

#### FORMATION OF DELTA PHASE

The formation of delta phase is favored by higher molecular weights, lower soap content and lower temperatures. It is thus obtained in sodium palmitate by quenching a nigre (from which beta crystallizes on ordinary cooling), but dominates similar sodium stearate systems on ordinary cooling. In the palmitate, delta forms spontaneously at room temperature in mixtures of water with dry alpha, beta and omega phases having real soap content up to at least 50 per cent. In addition, extrusion of high-moisture sodium palmitate systems at and somewhat above room temperature, and of high-moisture sodium myristate systems at least at room temperature converts beta to delta phase. In sodium laurate, however, neither quenching nor extrusion has enabled us to attain delta phase.

Analogous behavior is noted in the

Table IX—Comparison of Properties of a Soap<sup>a</sup> Prepared with Varying Amounts of Beta and Omega Phases

| SAMPLE | PROCESSING TEMP., DEG. F. | APPROX. PHASE COMPN. IN BAR, PER CENT |          |          | PER CENT SOAP RUBBED OFF OF BAR IN USE | FIRMNESS, ARBITRARY UNITS | SOAKING TEST AT 80 DEG. F. <sup>b</sup> |   |
|--------|---------------------------|---------------------------------------|----------|----------|--|---------------------------|---|---|
|        |                           | $\beta$                               | $\omega$ | $\delta$ |  |                           | GRAMS/SQ. IN. LOST                      | PER CENT STRENGTH RETAINED <sup>c</sup> |
| A      | 205                       | 0                                     | 100      | 0        | 0.8                                    | 91                        | 0.2                                     | 40                                      |
| B      | 194                       | 0                                     | 100      | 0        | 0.7                                    | 106                       | 0.3                                     | 47                                      |
| C      | 180                       | 25                                    | 75       | 0        | 1.0                                    | 80                        | 0.5                                     | 43                                      |
| D      | 165                       | 75                                    | 15       | 10       | 1.6                                    | 84                        | 1.3                                     | 22                                      |
| E      | 155                       | 85                                    | 10       | 5        | 1.9                                    | 77                        | 1.5                                     | 6                                       |
| F      | 140                       | 90                                    | 5        | 5        | 1.8                                    | 60                        | 1.3                                     | 8                                       |

<sup>a</sup> 80 per cent tallow—20 per cent coconut formula, 18 per cent moisture.

<sup>b</sup> Bars of soap cut to size and soaked five hours at 80 deg. F. in distilled water.

<sup>c</sup> Figures as per cent strength retained after soaking and as loss of weight per unit surface. Measurements before and after.

Just one fact should be added regarding the structure of delta—the apparent coincidence of the long spacing data for delta phase and omega. In Tables VII and VIII the long spacing values for delta and omega sodium myri-

commercial soaps. Delta phase appears in the 80 tallow-20 coconut composition on cooling the more dilute systems and under some conditions even up to about 75 per cent soap; it is also formed by orifice extrusion and milling provided the temperature is sufficiently low.

Table VIII—Angles of Tilt<sup>a</sup> of Alpha, Beta, Omega and Delta Sodium Soaps

| SOAP         | ANGLE OF TILT, DEGREES <sup>a</sup> |      |                   |                   |
|--------------|-------------------------------------|------|-------------------|-------------------|
|              | ALPHA                               | BETA | OMEGA             | DELTA             |
| Na laurate   | ...                                 | ...  | 59.7              | ...               |
| Na myristate | ...                                 | ...  | 60.5              | 61.4              |
| Na palmitate | 90 <sup>b</sup>                     | 64.4 | 58.0              | 60.5              |
| Na stearate  | 90 <sup>b</sup>                     | 62.0 | 59.0              | 60.3              |
| Average      | 90 <sup>b</sup>                     | 63.2 | 59.3 <sup>c</sup> | 60.7 <sup>c</sup> |

<sup>a</sup> Calculated from the long spacings of Table V using the relation:

$$\sin(\text{angle of tilt}) = \frac{\text{experimental long spacing}}{\text{spacing of alpha structure}}$$

<sup>b</sup> See footnote 2.

<sup>c</sup> The average of the seven omega and delta values is 59.7°.

<sup>2</sup> Since this paper was originally submitted, two papers by M. J. Buerger dealing with the alpha phase have appeared [Proc. Natl. Acad. Sci., 28, 526-9, 529-35 (1942)]. The first verifies the hydrated nature of alpha. In the second the newer moving film techniques have led to refinements in knowledge of the alpha unit cell. Buerger places alpha in the monoclinic system with an angle  $\beta$  of some 94 deg. and finds the unit cell to be substantially twice as long as Thiessen's. These refinements, while important in a study of the ultimate structure of the soaps, do not restrict the usefulness of our angle-of-tilt calculation and classification (Table VIII). Instead of Thiessen's value 51.8 Å<sup>2</sup>, which we have used for the alpha c spacing, we would have to use 51.8/0.9979 = 51.9 Å<sup>2</sup>, a negligible difference.



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**T**HESE were great Americans. They are gone...but through you their power is still great. You have some of these portraits in your purse or in your billfold. They hold the power to spread compassion and comfort throughout the world.

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There are torpedoed seamen to be warmed and fed on the docks.

There are wounded lying on the plains of China who need medical supplies.

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When you give this month, to your community's war fund, you also give to the National War Fund. You give **ONCE** for **ALL** these agencies listed below. Your gift is divided in many ways...in proportion to the need! Some will go to the needy here in your own town. Some will go to relieve distress and sustain the morale of our allies. Some will go to provide the comforts and pleasures of home for our own troops, through the U S O.

Look at the names of the agencies below. You have given to many of them before...small gifts perhaps when your heart was touched. Add up what you gave before...then double it. You cannot give too much. The need is so great.

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for **ALL** these*

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British War Relief Society  
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Greek War Relief Association  
Norwegian Relief  
Polish War Relief  
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Delta is likewise encountered in 50 tall-low-50 coconut soaps. On the other hand, coconut soaps in the cooling and extrusion so far studied show only small amounts of delta, if any. Its effect in reducing firmness of soap bars is quite marked and its lathering power is superior to that of omega.

#### ALPHA PHASE

This phase, unlike beta, omega and delta, has not yet been encountered in the usual commercial soap formulas. It has been observed in pure sodium palmitate and stearate<sup>13, 14</sup>, and we have found it in mixtures of the two. Presumably it might occur in soaps derived from commercial stearic acid.

Our results contrary to Thiessen's observation indicate that alpha is in reality a hydrated phase, a small amount of water in the lattice being required for its existence. Thus when desiccated, single crystals of alpha palmitate and stearate can be observed microscopically to convert spontaneously into polycrystalline aggregates retaining the general shape of the original alpha crystal but actually existing as beta phase, as shown by X-ray analysis.

While the alpha phase is apparently not of practical interest in most commercial soaps, it is nevertheless of great importance as a starting point for

#### ACKNOWLEDGMENT

Acknowledgment is made to A. S. Richardson for his constant advice and assistance during the course of the work and in the preparation of this paper.

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the study of the structures of the beta, delta and omega phases. Knowledge of these structures is in turn of value in understanding soap behavior.

Thiessen's structure<sup>12, 13</sup> studies show that the *c* spacings correspond to twice the molecular length, the molecules being arranged perpendicular to the planes of the sodium atoms in the alpha structure. In addition to its usefulness in connection with classifying the three commercially important in-

clined structures according to angle of tilt, the alpha *c* spacing (double molecule length) is of direct importance to calculations in cases where the X-ray determination of stock composition is the only available method<sup>2</sup>.

Since certain "acid soaps" show rings close to the identifying rings of alpha phase, considerable care must be exercised in studying systems in which there is a possibility of the existence of acid soaps.

## Soap Needed in Most Industries

"TALKING THROUGH soap," "reading from soap," "riding on soap" and "dressing in soap" sounds hard to believe but it is all explained in "Soap: Tool of Peace, Weapon of War," a new booklet of The Procter and Gamble Co., which sets forth the generally little-known part that a commonplace item like soap plays in our complex civilization.

Of course, you do not literally talk through soap, but the telephone wires through which your voice is carried by electricity were very likely drawn with the lubricating aid of soap, the booklet just published by Procter and Gamble Company, points out.

Likewise, you do not read from soap, yet soap plays a vital part in the making of papers, especially coated papers. In the manufacture of newsprint, soap is used for cleaning the felts on which paper pulp travels in the paper mills. Soap also comes in handy for reprocessing scrap paper so that the paper can be used again.

As to riding on soap, anyone who travels by car or bus in a sense rides on soap since it is used in molding rubber tires. A soap solution is used as a lubricant to coat the inside of the mold so that the rubber will not stick during the vulcanizing process. Soap, too, plays an important role as an emulsifier in the polymerization that is part of the synthetic rubber-making process.

Everybody who wears shoes containing leather walks, so to speak, on soap because soap is used in the tanning process through which leather must pass before it is usable for shoes.

Soap, in addition to being a prime cleansing agent for all sorts of clothes, is also important in the manufacture of woolen goods.

In war time soap plays an even more important role, not only for

keeping clean but because its by-product is the vitally-important substance known as glycerine. Glycerine is used for making nitro-glycerine, which is the key ingredient of dynamite and other explosives.

Glycerine itself has many another use in war. It is an excellent component of quick-drying paint for coating and protecting tank, plane and warship metal surfaces. It rides the wings of many a bomber or fighter or torpedo plane as a de-icing agent. It is the most satisfactory base yet discovered for the ointments and emulsions which carry the near-miraculous sulfa drugs to our wounded men.

#### SOAP IN POST-WAR EUROPE

Plagues and pestilence notoriously hit hardest where the popular level of personal cleanliness is lowest. Had soap been as good, inexpensive and as widely used in the 13th Century in Europe as it is in the 20th in America, it may be doubted that the Black Plague could have killed off so large a part of Europe's population at that time as it did.

At the present time war-ravaged Europe is running shorter and shorter of soap, as blockades throttle down imports of fats and oils, and bombs wreck factories and supply warehouses. Stories of the impossibility of keeping clothes clean, as well as bodies have been coming out of Germany and Poland, and give some idea of the conditions that are existent in these countries and which could very easily form the basis of a terrific plague. Already plagues have broken out in various parts of Germany and Poland. This sounds a warning for us to realize that in rehabilitating Post-War Europe, we should rush soap as well as food to the rescue that there may not be a recurrence of another plague.



## Here and There Among Our Friends

▶ Alphonse Pillet, formerly manager of the New York office of the Aromatic Chemicals Division of E. I. du Pont de Nemours & Co., has joined the Tombarel Products Corp., New York, N. Y., as special representative and chemical advisor and will devote his time to the development of the company's synthetic aromatic chemical business.

Mr. Pillet, who has been associated with the industry for 18 years, was born and educated in Switzerland, coming to the United States in 1925 when he joined the New York office of the Rhodia Chemical Co. as perfumer. Later the Newport Chemical Co. took over the Rhodia company and subsequently E. I. du Pont de Nemours & Co. absorbed the Newport Chemical Co. and Mr. Pillet continued with the concern until a few months ago when he joined Tombarel.

▶ W. F. Fischer, sales manager for Magnus, Mabey & Reynard, Inc., New York, N. Y., has marked his 36th anniversary with the company. He joined the company on November 10, 1907, and has remained with it ever since.

▶ Lt. Arthur L. Bender, son of A. Lincoln Bender of Rap-I-Dol, Inc., New York, N. Y., has been promoted to First Lt. The promotion came in recognition of creditable work by Lt. Bender who has been serving overseas in the 22nd Photo Reconnaissance Squadron, Army Air Forces.

▶ Harry Broder, New York, N. Y., manufacturer of plastic lipstick containers again evidenced the spirit of friendly cooperation which exists throughout the organization at the party held the day before Thanksgiving at the plant, 9 East 47th Street. Each year the organization enjoys a Thanksgiving party as well as a Christmas party at which executives and all employees meet upon the same plane for an informal good time. The entire fifth floor of the building was appropriately decorated and a bountiful assortment of refreshments was served. In accordance with his usual custom since Pearl Harbor, Mr. Broder invited enlisted men from the services particularly the Navy to come as guests. Music was provided for dancing and the younger set enjoyed dancing during the greater part of the afternoon. Guests and friends who dropped in at the executive offices on the third floor also found a welcome and they too joined in the festivities.

▶ H. S. Darlington's host of friends will be delighted to learn that he has completely recovered from his recent



H. S. Darlington

serious illness with

virus pneumonia which confined him to the hospital for nearly a month. He has resumed his responsibilities in directing the affairs of the company and apparently has suffered no ill effects from his recent ordeal. Mr. Darlington is president of

A. H. Wirz, Inc., Chester, Pa.

▶ H. R. M. Gordon who has been associated with the toilet goods industry in various capacities for many years is still confined to the Beth Israel Hospital, New York, N. Y., as the result of his recent severe illness. He has been making excellent progress and it is expected that he will be at his office before Christmas.

▶ S. Wylie Walker, Westfield, N. J., was elected president of the Quarter Century Club of Merck & Co., Inc., Rahway, N. J., at the annual dinner held on November 15 at the Elks Club in Elizabeth. The Merck Quarter Century Club is composed of 180 members who have been in the employ of the company for 25 years or more. The meeting was addressed by George W. Merck, president of the company.

Miss Charlotte J. Schubert, Rahway, was elected vice-president of the club and Walter L. Wilson, Rahway, was elected secretary-treasurer. The executive committee elected for the new year consists of Arthur D. Walsh, New

Brunswick, chairman; A. Fred Hope, John A. Machon, Mary E. Hornby and Ethan Lauer, all of Rahway.

The retiring president, Dr. William H. Engels, presided at the meeting.

## Book to Aid You

THE DISPENSATORY OF THE UNITED STATES OF AMERICA — 23rd edition. Horatio C. Wood, Jr., and Arthur Osol, 7 x 10 in. Indexed, 1881 pages. J. B. Lippincott Company, Philadelphia, Pa. Price \$15.00.

The 23rd edition of the U. S. Dispensatory is one of the most outstanding editions, for, in the seven years elapsing since the previous issue, more revolutionary changes in the science of pharmacology and the art of therapeutics have occurred than during any equivalent period in the history of medicine.

The contents are arranged in three sections: 1. drugs recognized by The U. S. Pharmacopoeia, The National Formulary and The British Pharmacopoeia; 2. drugs not recognized by the same; and 3. processes, reagents, solutions and tables.

The new developments include in this edition essential war emergency replacements, formulas for clinical laboratory reagents, new synthetic remedies, such as sulfonamides, hormones, vitamins, biologicals, endocrine preparations, including methods of manufacture and articles on glycosides, alkaloids, sterids, amino acids, surface-active agents, fixed and volatile oils, hydrogen-ion concentration, radioactivity and colloids.

This edition is the most valuable yet issued because of its all inclusive nature of new developments, its inclusion of processes, reagents, solutions and tables.—M. N. C.

(More book reviews on page 85)



Scene of the surprise birthday party held recently at the Waldorf-Astoria Hotel, New York, N. Y., in honor of Percy C. Magnus, president of Magnus, Mabey & Reynard, Inc.







# U.S.I. CHEMICAL NEWS

December ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1943

## Diethyl Oxalate Supplements Scarce Lacquer Solvents

Reagent Uses Also Afford  
Many Possibilities in Synthesis

Although in the past diethyl oxalate has found its greatest use in organic synthesis, it is today being employed in substantial quantities to replace and extend critically short nitrocellulose solvents.

Diethyl oxalate is an excellent solvent for nitrocellulose and has a slow evaporation rate. While its applications have previously been limited to specialized fields, due to its tendency to hydrolyze, it is now being used very successfully where special care is taken to eliminate all possible water from the formulation. It is recommended that wherever possible diluents with high aromatic content be used inasmuch as diethyl oxalate has a much higher dilution ratio with aromatic hydrocarbon diluents than it has with petroleum naphthas.

Diethyl oxalate offers many possibilities in chemical synthesis. Here are a few typical examples:

1. With ethyl acetate in the presence of sodium ethoxide (sodium ethylate) it yields ethyl sodium oxalacetate.
2. With acetone in the presence of sodium ethoxide, it yields xanthochelidonic acid ester (acetone dioxalic ester) from which the ethyl ester of chelidonic acid may be obtained. Gamma-pyrone may in turn be obtained from this latter substance.
3. With zinc and alkyl iodides, it gives ethyl esters of dialkylglycolic acid.
4. With sodium amalgam, the alcoholate of ethyl glyoxylate, ethyl oxomalonnate, ethyl racemate, and the ethyl ester of desoxalic acid may be obtained. From this latter acid there may be obtained by reacting with phenylhydrazine, the phenylhydrazone of ethyl glyoxylate.
5. Electrolytic reduction gives ethyl glyoxylate.
6. With sodium ethoxide and urea, it gives parabanic acid (oxalylurea).
7. It is used to manufacture phenobarbital.
8. With ortho-nitrotoluene there results an alcohol condensation product containing a third group in the benzene ring.
9. By distilling with an alcohol other than ethanol the oxalic ester of the alcohol may be obtained through alcoholysis.

## Patents New Protective Treatment for Textiles

A Canadian Patent has been granted covering the use of trichlorobenzyl phenyl ether dissolved in alcohol or acetone as a moth-proofing agent for textiles. It is mixed with salicylanilide as a fungicide or with pyrethrum as an insecticide.

## New Anti-Rust Compound Is Announced by U.S.I.

Extensive Use in Automotive and Industrial  
Cooling Systems Seen for New Powder

Improved protection for radiators and other cooling-system surfaces is made possible by a new anti-rust compound in powder form, recently developed by U.S.I. Orange in color, the powder works equally well with water or any type of anti-freeze solution. Two ounces will protect a five-gallon capacity automobile cooling system.

### Tests Possible Solvents For Tung Oil Extraction

Renewed interest in the possibility of increasing the yield of tung oil from domestic fruits is reflected in a recent study of solvents which might be used in an extraction process. Out of a total of 33 solvents studied, ethyl acetate and some 10 others held the most promise, from the standpoints of quality and yield of tung oil produced and from that of economics.

The study, carried on by three Department of Agriculture scientists, points out the necessity of selecting a solvent of sufficiently high boiling point to avoid excessive vapor losses, yet low enough to prevent deterioration of the tung oil quality through exposure to unduly high temperatures.

### Alkyd Resin Can Replace Phenolics in Navy Primer

The Navy Department has announced that it will now accept, tentatively, a primer based on Holabird Specification ES-680a, Class 101 for use on all Naval equipment and machinery. This is covered by Specification 52-P-26 Primer, Metal (Brown) dated June 1, 1943, and will replace the original Zinc Chromate Primer 52-P-18 (phenolic) which will be used only for the painting of ships' hulls and com-

(Continued on next page)

Use of an inhibitor of this type in automobile cooling systems is particularly advisable this winter where anti-freeze solutions are being re-used, as the rust-inhibiting qualities originally present in the anti-freeze will have been lost.

### Summer Use Important

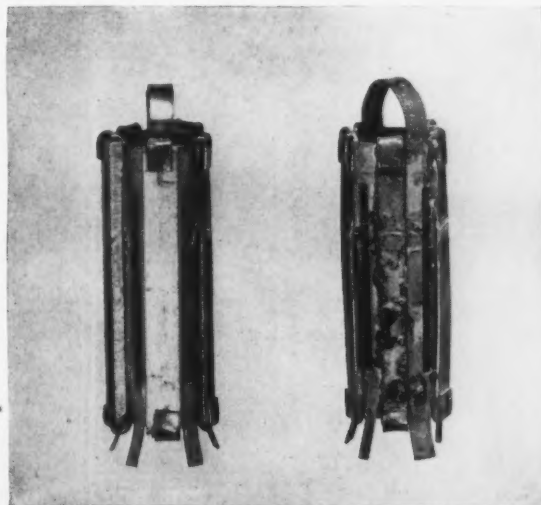
In addition to imparting anti-corrosive properties to alcohol or permanent type anti-freeze solutions, the compound is recommended for use for summer radiator protection. Recent reports by government agencies and automotive engineering groups indicate that radiator corrosion is at its peak during the summer, due to the higher temperatures and the fact that ordinary water is so generally used as a coolant.

### Protects Many Metals

Extensive tests in U.S.I. laboratories have shown that the new inhibitor will protect surfaces of a wide range of metals, including aluminum, steel, cast iron, copper, brass and solder. By keeping heat transfer surfaces clean, the product helps assure efficient cooling, thus preventing engine overheating and loss of anti-freeze from boil-over.

U.S.I.'s new compound has no effect on rubber, and therefore cannot cause trouble with radiator hoses or other rubber appliances in the cooling system. It is also entirely odorless.

Unretouched photo of test bundles just as they appeared after an accelerated corrosion test simulating the most severe conditions encountered in automotive radiators. Bundles consist of strips of copper, aluminum, solder, brass, and cast iron, all crimped with good electrical contact to a steel frame. Note the corrosion and severe electrolysis which has taken place on the "control" bundle at right, which was exposed to untreated tap water. Note how clean and free from electrolysis the bundle at left is after exposure to similar tap water which had been protected with U.S.I.'s new anti-rust compound.



**Resins in Navy Primer**

(Continued from preceding page)

partments. Until such time as the Navy can evaluate submitted samples of Specification 52-P-26 and can establish an approved list, those products now having the approval of Holabird Quartermasters Depot will be accepted by them.

Specification 52-P-26 is met completely by Aroplaz 1323-D, a product of U.S.I.'s Stroock & Wittenberg Division, which is already being used extensively in Holabird Specification ES-680a. Although this is one of the lowest priced pure alkyl resins, it is a versatile high-quality product.

**Recovery of Free Acid  
From Pickling Liquors**

Acetone has been found superior to solvents previously tried for promoting the crystallization of coppers from pickling liquor. While acetone is not satisfactory for the treatment of continuous-process liquor, batch liquor responds well from the standpoints of ferrous sulfate removal, acid concentration, quality of coppers, and acetone separation.

**Reports New Remedy  
For Skin Ailments**

Tetraethylthiuram monosulfide is reported by a British Journal to have proved effective in the treatment of scabies. The liquid preparation used was an emulsifiable oil having the composition:

|                               |     |
|-------------------------------|-----|
| Tetraethylthiuram monosulfide | 25% |
| Polyglycerol ricinoleate      | 10% |
| Industrial methylated alcohol | 65% |

One part of this oil was added to four parts of water immediately before use.

**Influence of Alcohols  
On Indicators Described**

Color change of some titration indicators is reported to be markedly influenced by the lower alcohols.

The change is least pronounced with ethyl and *n*-propyl alcohol, more so with methyl, and most pronounced with iso-propyl alcohol. Impurities in the alcohol also have an appreciable effect, impossible values being obtained in the presence of ethers.

**Method for Determining  
Chlorophyll and Carotene**

Of significance to the dehydrated food and other industries is a recently announced method of determining chlorophyll, pheophytin, xanthophyll and carotene—key factors in the taste and nutritional "goodness" of vegetables.

The method involves a combination chromatographic, solvents-partition, and spectrophotometric techniques. Pigment is first extracted with acetone, then transferred to ether and subjected to direct spectrophotometric analysis for chlorophyll and pheophytin. Xanthophyll and carotene are subsequently determined by chromatographic analysis.

**Molasses Extender**

Demand for Special Liquid Curbay as an extender for molasses in hog and dairy feed manufacture continues to grow. This U.S.I. product is also finding increased industrial use as a binder, and is said to offer interesting possibilities in the preparation of specialty agricultural products for plants and soils.

Special Liquid Curbay contains approximately 40-45% solids, can be handled just like molasses in storage or mixing equipment, and is available in tank car quantities without allocation limitations.

**Determination of Water  
In High-Proof Ethanol**

A mixture of anhydrous ethanol and bicyclohexyl exhibits a critical solution temperature of 23.4°C.; with 1 per cent of water present, this temperature becomes 41.4°, and with 2 per cent water 54.1°. Thus the critical solution temperature can be plotted against the percentage of water present and the resulting curve used for determining the water content of high-proof alcohol.

The procedure recommended is to add 4.0 ml. of bicyclohexyl to 2.0 ml. of the alcohol to be tested and stir with a dry thermometer. Heat until the solution becomes clear and then cool slowly with stirring. Note the temperature at which the mixture becomes slightly opalescent.

**TECHNICAL DEVELOPMENTS**

Further information on these items may be obtained by writing to U.S.I.

**Two new fatty acids**, azelaic and pelargonic, described as straight chain acids containing nine carbon atoms are announced. Now in commercial production, these acids suggest new fields for investigation in textile applications, modifications of resins, plasticizers, etc. (No. 749)

**A paint brush cleaner** is offered which the maker claims will swell the bristles and loosen dried paint in 12 to 36 hours. The liquid is non-inflammable, non-fuming and harmless to the hands. It can be re-used after straining. (No. 750)

**Low freezing points** and mild odors are the featured points of a new series of plasticizers and softeners now being offered for use in coatings, adhesives, plastics, synthetic resins and rubbers, etc. A chart of the physical properties of these new products is available from the maker. (No. 751)

**A quick-setting, tacky adhesive**, developed primarily to cement cork inserts in reconditioned or new crows, is reported to work especially well in automatic cork inserting machines. The maker states the product is odorless and non-toxic. (No. 752)

**Preventing electrolysis** and consequent boiler corrosion is the purpose of a new galvanic cell designed to hang from a tube in the boiler. The cell, it is stated, concentrates electrolytic action at its negative pole, precipitating the mineral matter for removal during blowdown. (No. 753)

**A new plasticizer**, claimed to impart striking low temperature flexibility to synthetic rubber products, is being offered to processors of Butaprene, Chemigum, Hycar, Neoprene, Perbunan and Thiokol. (No. 754)

**A new floor cleaner**, recommended also as an oil and grease absorbent for reducing fire and slipping hazards, is announced. Said to be non-abrasive, odorless, and non-injurious to skin, clothing or flooring, the product will absorb up to 50% of its weight of oil or grease. (No. 755)

**Stable, uniform oil emulsions** are said to be produced at higher speed with the aid of a new group of soluble resins. Sodium and potassium salts of selected resins, these resins are useful in the manufacture of cutting oils, polishes, paints, and many other products. (No. 756)

**A new gas mask**, approved for use in the presence of acid gases, organic vapors, ammonia, carbon monoxide and toxic smokes, where sufficient oxygen is present to support life, is announced. Shatter-proof lenses, an arrangement to prevent lens-fogging, and a dial which indicates safe remaining service time are incorporated in the design. (No. 757)

**A new paint remover** is reported to cut through the toughest film, leaving a clean, neutral surface that requires no after-washing or neutralizing. The product is said to be waxless, involve a minimum of fire and toxic hazards. (No. 758)

**U.S.I. INDUSTRIAL CHEMICALS, INC.**

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Amyl Alcohol  
Butanol (Normal Butyl Alcohol)  
Fusel Oil—Refined

**Ethanol (Ethyl Alcohol)**

Specially Denatured—all regular and anhydrous formulas  
Completely Denatured—all regular and anhydrous formulas  
Pure—190 proof, C.P. 96%, Absolute

Super Pyro Anti-freeze  
Solox Proprietary Solvent

**ANSOLS**

Ansol M  
Ansol PR

**ACETIC ESTERS**

Amyl Acetate  
Butyl Acetate  
Ethyl Acetate

**OXALIC ESTERS**

Dibutyl Oxalate  
Diethyl Oxalate

**PHTHALIC ESTERS**

Diamyl Phthalate  
Dibutyl Phthalate  
Diethyl Phthalate

**OTHER ESTERS**

Diatol  
Diethyl Carbonate  
Ethyl Chloroformate  
Ethyl Formate

**INTERMEDIATES**

Acetoacetanilide  
Acetoacet-ortho-aniside  
Acetoacet-ortho-chloranilide  
Acetoacet-ortho-toluidide  
Acetoacet-para-chloranilide  
Ethyl Acetoacetate  
Ethyl Benzoylacetate  
Ethyl Sodium Oxalacetate

**ETHERS**

Ethyl Ether  
Ethyl Ether Absolute—A.C.S.

**RESINS**

Natural  
Synthetic

**ACETONE**

Chemically Pure

**FEED CONCENTRATES**

Curbay B-G  
Curbay Special Liquid  
Vacatone 40

**OTHER PRODUCTS**

Collodions  
Ethylene  
Ethylene Glycol  
Indalone  
Nitrocellulose Solutions  
Urethan

Registered Trade Mark



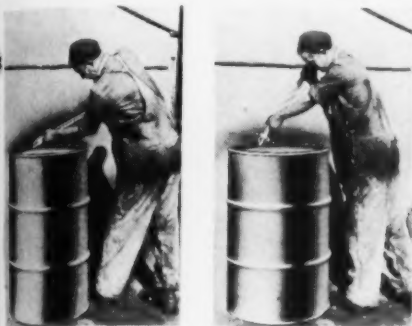




# New Products, Ideas and Processes

## Drum-opening tool

Operating on the simple principles of a household can opener, Merrill Brothers, Brooklyn, N. Y., drum opening tool in one quick easy thrust cuts as it firmly grips the outside of the barrel. It cuts smoothly, evenly, folding cut edges in close to the barrel, the company states.



Man demonstrating the drum opening tool

By using this opener drums may be re-used; hand injuries are prevented; no time is lost and the usual risks involved in opening light weight drums is obviated.

## New skin protector

A new skin protector has been announced by Commercial Solvents Corp., New York, N. Y. The new product, called CSC Protector, is non-sticky, white and greaseless, says the company. It will not irritate sensitive skin, and it has no drying effect even after long and continuous use.

## Preservative for bottle caps

In U. S. Patent 2,306,371, T. F. Bani-gan claims that phenyl biguanide will meet all the requirements for a preservative used in aqueous glycerine solutions for treating and shipping bottle caps, bands and pellicles used to form protective and ornamental seals. Not only does this preservative protect the softening solution and the cellulosic material from bacteria and molds, but it also has a pleasant odor, retards fading of developed colors, dyes or inks in the gel bands. The preservative is non-irritating, colorless, does not cause dermatitis. Also it does not react with iron.

Various examples are given in the patent as to the use and application of this preservative and its methods of shipment.

## Multi-ply container

In a U. S. Patent, J. S. Stokes has designed a multi-ply container comprising at least two nested, substantially rectangular tubes flattened and attached to each other at their opposite ends to form seals and define opposite end walls of the container. This patent has been assigned to Stokes & Smith, Philadelphia, Pa.

## Stock-room bin card holders

Stock room bin card holders made of ivory plastic, available in a variety of shapes and sizes for immediate shipment, are the latest addition to the line of the Plastic Division of Hollywood, Athletic Company, Los Angeles, Calif.

The holders are applicable to any flat surface—on wood by means of tacks, for which holes are provided, or on metal with glue. They consist of the plastic holder itself, an insert tab on which description of the article may be typed, and a covering sheet of transparent plastic.

The material is practically soil proof but is washable in addition.

## Norelac, film-forming resin

A new film-forming resin with properties which promise to make it valuable for containers for food products, chemicals, precision machine parts, and heat-sealed moistureproof packages in general, has been developed by the Department of Agriculture, Washington 25, D. C.

Scientists of the Northern Regional Research Laboratory at Peoria, Ill., where the discovery was made, say that this thermoplastic resin can be made from any vegetable oil that is rich in linoleic acid. Soybean and linseed oils are being used at present.

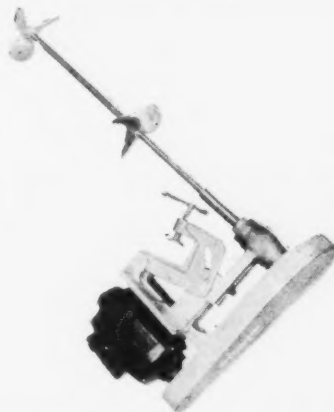
Tests indicate that this product may be used for laminating and moisture-proofing cellophane, aluminum and lead foil, glassine and kraft and sulfite papers. It has excellent adhesion to most surfaces and good resistance to water, alkali, acid, vegetable oils and some organic solvents. It is promising as a substitute for shellac.

Like many other war-time products, it is finding immediate application for war uses before its entire scope of usefulness has been investigated.

Industrial companies are cooperating in pilot-plant production of this resin, and in developing its commercial production and application to packaging materials.

## Industrial portable mixer

A new belt type portable industrial mixer, in which the motor hangs outside the tank and out of the path of destructive mixing fumes, is a new development of United Electric Motor Co., New York, N. Y. It is designed so



Portable mixer for precise mixing speeds

that the balanced hanger carries the weight of the unit below the center of gravity and needs no tension on the clamp to hold the mixer in place.

## Perm-Aseptic

Perm-Aseptic, a clear colorless and odorless liquid, though not a new product, is new to the cosmetic and drug industries. This fungicide, bactericide and germicide, the company claims, renders creams and lotions actively antiseptic for the life of the lotions or cream. It is also used as an anti-odorant in deodorants, a preservative in leg make up, and in various other cosmetic preparations. It is the product of the Perm-Aseptic Process Co., 247 Park Ave., New York, N. Y.

## Squeeze-Grip type valve

The Squeeze-Grip type valve for hand-type carbon dioxide fire extinguishers originated and developed by the C-O-Two Fire Equipment Co., Newark, N. J., has been adopted as standard by the U. S. Navy Bureau of Ships. The valve has also passed tests of the U. S. Bureau of Standards and is on the approved listing of the Coast Guard Merchant Marine Committee for use on passenger and cargo vessels in accordance with U. S. Senate Report No. 184, the company claims.

## Automatic feeding device

An improved model of the automatic detergent feeding device for use with dishwashing machines has been developed by the Mathieson Alkali Works, Inc., New York, N. Y.



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FLAVOR OILS and ESSENCES  
PERFUMERS' TINCTURES  
FIXATIVES (FOR PERFUMERS)  
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# Our Washington Correspondent Reports to You

by ARNOLD KRUCKMAN

**T**HE ALCOHOL Allocation Order M-30 was amended and simplified during November chiefly for the purpose of reducing the paper work in administration. For instance, small users who obtained not more than 162 gallons per quarter for the manufacture of toiletries and cosmetics are not required to secure written authorization from WPB, and those who did not use alcohol in the base period ending June 30, 1941, are no longer limited in use of alcohol if they do not use over 162 gallons per quarter. Those who were previously limited to 3500 gallons per quarter may now purchase 7900 gallons in any quarter without WPB authorization. However, use in connection with food products is still based on a limit of 100 per cent of the quantity used in the year ending June 30, 1941; and must be based on 50 per cent of the same year when used for candy glazes, shoe polish, non-body deodorant sprays, witch hazel, all toiletries and cosmetics including bay rum, body deodorants, face and hand creams and lotions, hair and scalp preparations, perfume and perfume materials including tinctures and fixatives, shampoos, toilet soaps, shaving creams and toilet water.

The purchaser of alcohol also must give his supplier a certificate. You may either obtain the form from the supplier, or by applying to Frank E. Bennet, administrator of Conservation Order M-30, WPB, 1506 Temporary Building S, Washington, D. C., or any regional office.

## ALCOHOL AVAILABILITY STATIONARY

There has been practically no change in the production or in the volume of alcohol available. Officially the situation is in status quo. Unofficially here they tell you on the Hill that a Nazi formula has come to America by way of Scandinavia which has been used successfully in a plant in Canada to make a sound non-beverage alcohol from woodpulp liquid, and that the same process may be utilized in the West to make alcohol at a cost from 18 to 20 cents per gallon, as compared to the grain product that now costs 83 cents per gallon, if and when Government permits the manufacture. A western group is now trying to secure the necessary approval and financing

from Government to start production. This might materially ease the alcohol drought. WPB intimates that increased production of industrial alcohol is expected from limited supplies of corn now available.

## GLYCERINE SUPPLY EASED

Glycerine also has been moderately eased. During December manufacturers may obtain 100 per cent of the base use in 1940, and it is expected this schedule may be continued during January, February and March, although we are warned not to consider this possibility as absolutely certain. The exigencies of the war constantly make all expectations conditional upon the current situation. Those who purchase small orders of glycerine may obtain up to 1150 pounds if their purchases do not exceed 70 per cent of the 1940 base.

## FATS AND OILS CONTINUE HIGH

Government predicts fats and oils will continue at high prices during 1944 and well into 1945. Production during the crop-year 1943-1944 may total 12,000,000,000 pounds. Chief lend-lease shipments go to Russia and the United Kingdom.

Some fats and oils unnamed, hereafter will be imported by private interests under all government restrictions and controls. However, during the next 12 months the U. S. is expected to produce 90 per cent of its fats and oils in contrast to pre-war levels of 82 per cent.

Leon J. Falk, Jr., is the new chief of Fats and Oils Branch, WFA, succeeding Charles T. Prindeville, who returns to the vice-presidency of Swift & Co.

## OTHER FOREIGN PROBLEMS

There is a further contribution to the menthol discussion from China. It is reported the China Vegetable Oil Corporation has menthol, but does not have factories in which it could be crystallized for export. It has been suggested the factories should be built to crystallize as much as 100,000 pounds of crystals per year. There would also be the problem of transport. It also is reported that extensive experimentation is in progress with peppermint for menthol in Mexico.

## CONTAINER ITEM SITUATION

Apparently there is no certainty that the supply of cellulose acetate, desired by lipstick-case manufacturers, available to the extent of 200,000 pounds in December, may be had in January. It is possible the supply will continue, and might even increase, but it is not by any means certain. It is expected there will be a new order on glass for containers in January. There is some hope that there may be a slight increase of containers. But the increase will be so slight, if there is any, that those in the know warn not to expect any material difference.

## PEPPERMINT CONTINUES UNSOLVED

Peppermint, still an unsolved puzzle at this writing, reflects the government muddle that extends to most essential oils used for domestic purposes. At this writing, all field returns not being in, it is unknown whether or not peppermint oil will be allocated. Apparently the chief of OPA's Drug Section, Robert Dupree, a gifted legal dialectician, has been able to divert attention deftly towards the lesser FWA allocation problems while the chief trouble is pricing. Price-fixing is obviously the legal duty of OPA. Mr. Dupree seems to have passed the buck by indirection to the essential oils man of WFA, A. L. Kalish. It is not the province of WFA to fix prices, but the impression is abroad here that WFA will be made the stalking horse. The responsibility may be thrown upon WFA by the process of asking for recommendations. These recommendations would then form the basis of the debate on the prices which OPA may adopt or decline. OPA would thus sidestep public responsibility and leave the burden of any blame on WFA.

The OPA people are said to take the position that peppermint and other essential oils in domestic use are non-essential for the war economy, and that OPA has more important tasks connected with essential commodities which have a serious influence on the rising cost of living. Meanwhile, other essential oils, such as wormseed and sassafras, also are involved in price problems which should be settled by the government authorities. The delays consequent upon inter-agency maneuvers

O'er all there hung a shadow and a fear,  
A sense of mystery the spirit daunted,  
and said as plain as whisper in the ear  
The place is Haunted.

—LONGFELLOW

Deep into the darkness peering, long  
I stood there, wondering, fearing,  
Doubting, dreaming dreams no mortal  
Ever dared to dream before.

\* \* \*

And now as the night was senescent,  
And star dials pointed to morn,  
At the end of our path a llescent  
And nebulous lustre was born.

—EDGAR ALLEN POE

DID YOU EVER  
SEE A

*Cat-mare?*

That's the kind of NIGHTMARE Rodents sense when  
they smell a Skunk or Ferret!

They abandon the Premises as though Plague Stricken.

Rats and Mice flee buildings for quieter, sweeter dreams  
and safer quarters.

THE SKUNK'S  
CALLING CARD

PETRA

*This is the skunk  
that caught the rat,  
that ate the malt*

*—that lived in the house that Jack built.*

Only a TRACE of the PETRA required to give the neces-  
sary effect. Mix it with Cedarwood and no odor of  
skunk remains. But the SCENT is immediately detected  
by PESTS and VERMIN, who vacate at once!

SPARHAWK CO., SPARKILL, N. Y., U. S. A.

# BRIDGEPORT...

For the past two years our facilities have been devoted almost exclu-  
sively to the production of war materials. We have been fortunate, in  
that we have been able to handle this work on the same equipment  
used for our regular peace time products, and, consequently, when  
material again becomes available for lipstick containers, vanity cases  
and other metal cosmetic items we will be prepared to start producing  
our regular line immediately. If you too are planning your post war  
program, we will be glad to assist you.

THE **BRIDGEPORT** METAL GOODS MFG. CO.

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Established 1909

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VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER  
BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

naturally are costly to the industry which is unable to proceed decisively. The present tentative price ceilings for growers and dealers have virtually arrested trade. As is well known, the prices are not deemed sufficient to inspire confidence in the growers to plan next season's crop, and do not permit the houses which normally handle the commodities to trade without loss.

#### **SOUTH AMERICAN OPPORTUNISTS**

In the meantime the South Americans appear to be making hay while the sun shines down there and is obscured here. Brazil is the outstanding example. The latest report reveals that the Bank of Brazil will not permit the export of menthol made from its peppermint oil, except at a price of \$29 per kilo. At the same time the Bank of Brazil, which regulates the prices, permits domestic sales at \$17.50 per kilo., of the five per cent the Brazilians are allowed to sell in their own country. It is reported the crop of peppermint, estimated at approximately 350 metric tons, is produced at a cost ranging from 70 to 90 cents per pound. While the floor of the prices for menthol has been fixed by the Bank of Brazil at \$29 per kilo., it is authentically reported most of the sales have been made at prices for export ranging from \$31 to \$36 per kilo. Obviously the product is almost solely required in the North American market, and the buyers therefore are North Americans.

#### **ALLOCATIONS MAY SOLVE PROBLEM**

We therefore have the picture of a flourishing market in Brazil, based on purchases by American dollars, at substantial profits, while the American growers and dealers have a frozen market because the government agencies cannot determine who shall fix prices which will enable the growers and dealers to do business at a profit. Mr. Kalish is convinced the domestic peppermint oil situation may be solved equitably only by allocation. It is his conclusion that the small user cannot be properly protected except by allocation. Mr. Kalish essentially has the same direct point of view which characterizes Mr. Bennett, the alcohol administrator. Mr. Bennett is notable for hewing straight and unswervingly to the line. It is probable that Mr. Kalish, as peppermint oil administrator, would find his solution in allocation. And that may eventually be the crystallization of the amendment to the Peppermint Order so long in the making. But also it is not improbable that higher authority may find it more expedient to make allocations for lend-lease and for the need of the armed services, and

leave the rest of the problem for determination to the industry itself. It must be remembered that the Senate Truman Committee has taken a hand. It has set in motion an investigation to discover why it is necessary to place government controls on the distribution of a non-essential commodity.

#### **COMBINED FOOD BOARD PERSONNEL**

Canada has recently become a member of the Combined Food Board. The members of this Board are War Food Administrator Marvin Jones, for the United States; R. H. Brand, representing United Kingdom; J. G. Garding, Canadian Minister of Agriculture. The American unit of the Combined Food Board is the Food Requirement and Allocations Committee. Roy F. Hendrickson, WFA distributing director, is the chairman. Its membership consists of representatives of War Department, Navy, Office of Foreign Economic Administration, War Shipping Administration, War Food Administration and Food Production Administration. The committee clears all transactions involving food materials coming from abroad, and food materials shipped to foreign countries. A. L. Kalish of the Special Commodities Branch of the War Food Administration represents the problems of essential oils. The functions of his sub-committee are important to the industry because it will make recommendations affecting the exports and imports of essential oils and their products.

#### **THE PAPER SHORTAGE GROWS**

Paper, as must be obvious from the experience of newspapers and periodicals, is rapidly decreasing so alarmingly in supply that it is regarded as possible there will be still less available for corrugated cartons and the boxes used by the cosmetic and toiletries industries. A further limitation order is deemed possible. The whole container problem appears insoluble at this writing.

One of the most intelligent officials of the WPB declared that it is almost impossible to suggest any further substitutes to make containers. Apparently the situation is at the point where the bottom of possibilities has been reached. OCR, the civilian industries' champion among the war agencies, is working to find an answer. Mr. Whiteside believes morale is an important element in the war picture. For this reason he is sympathetic with any effort to aid the cosmetics and toiletries industry to find the materials and facilities it needs. But the difficulty remains principally manpower and manufacturing facilities.

#### **CHARLES A. WILLARD RESIGNS**

Charles A. Willard, deputy chief of the Drugs and Cosmetics Section of the Chemicals Division, WPB, for over two years the very popular father confessor of the cosmetics and toiletries industry in the war economy, quit on December 2nd to go into private industry as the fiscal executive of the Elizabeth Arden organization in New York. A New Englander from Springfield, Mass., Mr. Willard for years has been an enthusiastic Floridian. It was a signal evidence of the quality of his service in WPB that he left with a letter of very sincere regret from Donald Nelson, as well as a very fine traveling bag which was bestowed upon him at a luncheon on the last day of November by Drugs and Cosmetics Section Chief Fred Stock in the presence of the whole staff of the Section. Mr. Willard carried the burden of his job during the months when the work was most hectic. The fact that his office was shifted from one building to another at least eight times during his tenure is indicative of the conditions under which he functioned. Many top business men like Mr. Willard recently have left the scene of the Battle of the Potomac, most of whom, like Willard, unselfishly gave their best to the country at personal loss, with a patriotism which is justly comparable to the service given elsewhere by those in other war services. These men not only sacrificed their comforts and interests, but risked their health and even their lives, under the unavoidable conditions existing in the Capital. Some, like Federal Power Commissioner Clyde Seavey, died under the strain from heat exhaustion and overwork. It has been suggested with sound reason that these men, who supplied the driving energy at the top, should be eligible for marks of distinction similar to those given to men who serve in the field. A move is under way to create a Civilian Medal of Merit to be awarded by Congress only to those who outstandingly qualified after the manner of Mr. Willard.

#### **ELMER B. TYSDAL WILL CARRY ON**

It is not expected anyone will take Mr. Willard's place as Deputy Chief of the Section. In a general way his work will be continued by Elmer B. Tysdal, chief of the Cosmetic Unit of the Drugs and Cosmetics Section. Mr. Tysdal, well known in New York, Cleveland and Chicago, has been in Washington in his present office since early this year. He followed Dr. A. B. Pacini. As a business man Mr. Tysdal's detailed and exhaustive knowledge of the scientific details of the industry is fully as amazing as is his patience and courtesy.

# B-W LANOLIN U.S.P.

*EVENTUALLY—For better creams, with economy*

B-W Lanolin the superior quality puts into your cream that which gives the skin that smooth soft velvety feeling.

B-W Lanolin will never cause your cream to darken, is best by test and contains over 15% free and combined Cholesterol.

No other base used in your cream, equals the merits of B-W Lanolin.

B-W HYDROPHIL (Absorption Base) Made in U.S.A.

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**A Merry  
Christmas**  
and  
a Happy & Victorious  
New Year

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### *Replacing Glyceryl Monostearate*

**C**ERASYNT M will replace glyceryl monostearate wherever the latter is now being used, without necessitating any other change in formulation. Its great stability, which exceeds that of glyceryl monostearate, is an outstanding feature of Cerasynt M.

*Sample and price upon request*

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INCORPORATED 1904

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Cosmetic Raw Material since 1901  
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# War Check List for Nov.—Government Regulations

*Digest of Federal rules and regulations on price control, allocations and other regulatory measures of cosmetic, soap and flavoring industries issued or proposed during the past month*

## **Interpretation 1 of Limitation Order L-317—mfr. and use**

Some confusion has existed about the status of fiber shipping containers that have been rejected during the course of manufacture or upon delivery because of error in sizes, printing, etc. To clarify any wrong impression the War Production Board on November 6, 1943, issued an interpretation of this section of L-317, advising that restrictions are applicable only to new containers, and these, as such, are subject to the restrictions in the order until they have been used for the packing of a product.

## **Amendment to L-232 extending date for shipping packed goods**

Under an amendment to L-232 in regard to the use of wooden shipping containers, products which are forbidden to be shipped in wooden shipping containers may be shipped in such containers provided they have already been packed and ready for shipment as of October 25, 1943. This, however, applies only for 60 days after October 25.

Another amendment also places the quota basis on a quarterly schedule instead of a yearly one.

## **Petroleum Distribution Order No. 19 restricting micro-crystalline wax**

Control of the sale and distribution of micro-crystalline wax is now under the jurisdiction of the petroleum administrator for war and is subject to the regulations of Order 19 issued November 15.

No supplier shall deliver in any calendar quarter according to the restrictions more than 2½ per cent of such supplier's total production of wax during such period, and no person or supplier shall accept delivery of or use in any calendar quarter more than 3000 pounds of wax.

If any person or supplier desires to apply for authorization to accept delivery of or use any quantity of wax other than that amount specified above, application should be made on WPB

Form PD-2945 to the director.

It is also required that on or before the 12th of each month preceding each calendar quarter estimate of quantities of each grade of wax in inventory as of the first of the calendar quarter, and also the quantity of each grade of wax such supplier expects to produce or refine during the following calendar quarter, shall be furnished the director.

## **Minimum sale quantities and production runs interpreted—Reg. No. 1**

An interpretation of Priorities Regulation No. 1, which forbids making or accepting a delivery which will give the customer more than the "practical minimum working inventory reasonably necessary" for his own deliveries has been issued by the WPB.

According to the interpretation, a customer is permitted to order and to receive the customer's requirements for a longer period in advance than he needs at the time of delivery, but only provided he is unable to get the item from other sources in the smaller quantities he needs.

In regard to the small quantities the supplier may reject an order in a smaller amount than that which he usually handles.

## **Ascorbic acid order eased by WPB Amendment to M-269**

The War Production Board announced November 12 an amendment to order M-269, controlling the distribution of ascorbic acid, used to a considerable extent as an anti-oxidant in the soap industry.

## **Suspension of FDO-29 continued for another quarter**

The partial suspension of FDO-29 dealing with the use and distribution of cottonseed, peanut, soybean and corn oil, has been extended. This suspension was supposed to have expired Dec. 31, but will continue for another quarter, terminating March 31, 1944.

## **Inventory restrictions on tallow and grease relaxed**

According to report of the War Food Administration, increased production of tallow and grease will permit users to maintain a 60-day's supply after November 20. FDO-67 had limited these inventories along with those of fatty acids derived from tallow and grease to a 45-days' supply since Aug. 1. Control of the fatty acid inventories now included in FDO-87 has been removed from FDO-67.

An amendment to FDO-67 also permits use of tallow and grease from the limited inventories without authorization by the FDA. It is still necessary, however, for all industrial users, other than soap manufacturers, to obtain authorization for delivery of these fats by applying on FDA Form 478 to Chief of Fats and Oils Branch, FDA.

## **Saponified red oil allotted to soap makers in December**

The War Food Administration has announced that approximately one million pounds of the saponified (undistilled) red oil is available for distribution to soap manufacturers during this month.

Form FDA-478 should be used for making application for desired quantities. The use, FDA said, is not restricted to December, only deliveries scheduled for this month.

This allocation of red oil is a part of the two billion pounds of fats and oils expected to be made available to soap makers during the next 12 months, according to the allocation figures issued by WFA on November 8.

## **Trade mark, commercial print or label interest must be reported**

Any person having an interest in any trade marks, commercial prints or labels now or formerly owned by nationals of designated foreign countries must report his interest, including any agreement or claims of ownership, to the Alien Property Custodian on Form APC-31 by February 1, 1944.

**You can depend now as always on SHERWOOD'S  
consistently high quality and personalized  
attention to customers' requirements**

*White  
Oils*

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For Details  
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**SHERWOOD REFINING COMPANY, Inc.**

*The Refinery of Controlled Specialization*

ENGLEWOOD, NEW JERSEY · Refinery: WARREN, PA.

**POWDERING THE FACE  
vs  
FACING THE POWDER**



With their boys at the front, American women have decided to maintain an equally inspiring front at home. They know instinctively that morale and munitions march side by side.

As the fighting front demands the highest quality in supplies, so those behind the lines select the best in cosmetics.

Kelton, for years, has supplied some of America's leading cosmetic houses—is continuing and will continue to uphold their high standards.

We are privileged at this time to serve the U. S. Armed Forces and Defense Plants with special preparations.

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*Cosmetic Company*

230 West 17th Street,  
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Lipstick · Eye Shadow · Rouge · Mascara · Powder, etc.

***Imitation Oils***

**VETIVERT**

**YLANG YLANG**

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**SEELEY & CO.**

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• New York City

### Edible Oil Regulations

#### transferred from FDO 42 to FDO 29

Regulations prohibiting the use of the four edible oils, cottonseed, peanut, soybean and corn, in a number of industrial products have been transferred by the War Food Administration from Food Distribution Order 42 to the edible oil allocation order, Food Distribution Order 29 in order to simplify administrative procedure.

Effective November 30 these oils will be prohibited for use in soap except for medicinal and hospital purposes, and for delivery to the Army, and various other uses outside our industry.

### Inventories of new wooden shipping containers

Inventories of new wooden shipping containers, use of which to ship soap packed in glass, textile, metal or paper is restricted under L-232, may be worked off for this purpose in the 60-day period beginning Oct. 25, under the Nov. 10th amendment.

Materials to make wooden shipping containers can be obtained by soap companies, under certain conditions, but using MRO ratings, in accordance with Direction 3 of PR 3.

### Import rules on oils changed by War Food Administration

The War Food Administration and the War Production Board recently announced that the following fats and oils formerly imported only by a government procurement agency may now be imported by private interests: castor and oiticica oils, sesame seed, tucum, and muru muru cornels and oils, glycerine (Argentina and Canada), oleic acid, stearic acid and corn oil. Importers must obtain exemption under WPB Order M-63 by filing applications on WPB form 1041, to import above commodities.

### Aluminum under Order M-115 for collapsible tubes

Under an amendment to I-1, the use of aluminum in the manufacture of collapsible tubes is now permitted. The provisions, however, of the collapsible tube Order M-115 remain in effect and cover the use of aluminum for this purpose.

### Titanium dioxide order M-353 issued

The War Production Board has issued Conservation Order M-353 dealing with pure titanium dioxide. This does not greatly affect the situation with respect to this material; its only purpose is to prevent purchasers from extending

preference ratings below AA-2 unless the purchaser at the same time certifies that such purchase is a military order. In other words, indiscriminate extension of preference ratings is no longer permitted under this order.

### Puerto Rico and Virgin Islands included in Import Order M-63-g

Supplemental Order M-63-g under which Order M-63 is extended to cover Puerto Rico and the Virgin Islands the same as though such territories were a part of continental United States has been issued by the War Production Board. This provision, however, applies only to a limited list of products, such as edible animal oils and fats, soap—except castile—and soap powder.

### Glycerine allotment increased for December

The War Food Administration has announced that additional quantities of glycerine and red oil will be available to manufacturers for December use.

Applicants will receive up to 1150 pounds of glycerine. Manufacturers of drugs, pharmaceuticals and medicinal supplies will receive 100 per cent of their December requirements of glycerine.

Cosmetics, toilet preparations, dentifrices, shaving preparations and protective coatings are among those manufacturers that will receive 100 per cent of their requirements based upon the average monthly use in 1940.

### Linseed Oil Delivery Order FDO 63 amended

Regulations affecting deliveries of linseed oil at wholesale levels to permit a greater latitude in movement, and allow wholesalers to "carry over" quota deliveries from one calendar quarter to another have been revised by the War Food Administration.

An amendment to the order, FDO-63, effective December 1, permits unlimited delivery among wholesalers, and above wholesale level, but retains the limitation on deliveries to retailers.

## Books of the Industry to Aid You

CHEMICAL SOLUTIONS. *Frank Welcher, 6 x 9 in. Indexed, flexible cover, 408 pages. D. Van Nostrand Co., 1942. Price \$4.75.*

The author has collected under one cover a large variety of test solutions most commonly used by chemists. To this he has added some special uses, procedure for use, interfering substances, sensitivity of the test and special remarks about keeping qualities, etc.

The solutions are listed alphabetically. The index is different in that page listings are not given. Instead, only the names of substances that one might be testing for, are listed, with the test for each; these in turn are checked against the alphabetically arranged contents.

In any first edition, it is impossible to do a perfect job. Especially so in a book of this type, where there are so many varied names and uses for the different solutions. Undoubtedly, the author will expand the contents to make them more complete in later editions. Thus, under Kraut's Reagent, its use in identifying triethanolamine is not mentioned. Under Halphen's Reagent (rosin oil) no method of procedure is indicated. The same applies to a number of other tests.

The author claims no completeness in his compilation, especially if the same test duplicates another. Yet would it not be better for the chemist to select the test he considers most

appropriate, rather than the author eliminating such duplicity because he prefers to make the selection of appropriate test? When one compares this compilation against that found in but one portion of another compilation in Merck's Index, one finds considerable discrepancy. In this reviewer's mind, such a book should be as complete as possible if it is to enjoy wide usage.

The material in the book is good and well presented. Type is easy to read. There were no apparent mistakes, a tribute to the proofreader and author.—M. G. de N.

PRODUCTS AND PRIORITIES. *War Production Board. Superintendent of Documents. Government Printing Office. Published every four weeks. \$2.00 for 13 issues.*

A publication, Products and Priorities, to assist business men and government officials in obtaining information on all products, materials and services handled by the War Production Board has been issued by the Board. This booklet will be published every four weeks, and will include all information formerly contained in Priorities and in Product Assignments, both of which have been discontinued.

Present subscribers to Priorities will receive the new publication on the remainder of their regular subscription; Product Assignments had not been available to the public.

Natural and Aromatic  
Raw Materials  
Essential Oils  
for

*Perfumery •*

*Cosmetics •*

*Soap •*

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*Manufacturers of Quality Raw Materials  
For Perfumery For Over 100 Years*

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**ABSORPTION BASES**  
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COSMETIC preparations

Our Absorption Bases possess inherent emollient and absorption properties because of their high free Cholesterol content.

- Facilitate the penetration and absorption of incorporated therapeutic agents.
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*We also manufacture—*

**Cholesterol C. P., Emulsifiers, Ointment Bases, Industrial Penetrants, Softening and Dispersing Agents, and other Amerchol Products.**

AMERCHOL products are manufactured from specially processed Cholesterol and other sterols.

- Will not oxidize, nor turn rancid.
- Are unaffected by electrolytes.
- Retain their properties at extreme temperatures.
- Are for neutral, acid and alkaline creams, ointments and lotions.

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Sales Office—58 W. 40th St., New York 18, N. Y.



• TO MAKE STILL FURTHER PROGRESS IN THE SILK SCREEN TECHNIQUE OF "ON THE PACKAGE" PRINTING.

• TO OFFER YOU AND YOUR PRODUCTION DEPARTMENT THE BENEFIT OF THIS PROGRESS.

• TO DO IT GLADLY AND WITH A SYMPATHETIC APPROACH TO YOUR INDIVIDUAL PACKAGING PROBLEM.

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SILK SCREEN PRINTERS TO THE COSMETIC TRADE

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# Trade Jottings For Month of Nov.

ADVERTISING WOMEN OF NEW YORK, INC., replaced their annual March ball at the Waldorf-Astoria, New York City, with a cocktail party and tea at the House of Gourielli, December 3, for the benefit of the U. S. Maritime Service Graduate School Canteen. Miss Pauline Rawley, Fawcett Publications, Inc., headed the committee which included Miss Amy Blaisdell, publicity director of Helena Rubinstein, and Miss Henrietta Amos, publicity director of Tussy Cosmetics.

MARGARET ARLEN, who conducts the WABC women's program, "Margaret Arlen" is now heard over quarter-hour broadcasts devoted to women's club activities. Current participating sponsors are: Kem-cal Co., American Home Products, Pillsbury Flour Mills Co., Musterole Co., Dryden & Palmer, Inc., and Griffin Mfg. Co., Inc.

COCHRANE CORP., Philadelphia, Pa., has issued a new publication, "How to Keep Flowmeters Accurate."

COLGATE-PALMOLIVE-PEET Co.'s chairman, S. Bayard Colgate, who is chairman of the board of "Junior Achievement," an organization to teach young people business principles through actual participation in a business, told the story of "Junior Achievement" during an interview with Adelaide Hawley over NBC station WEAf recently.

MARIA DANICA LABORATORIES CORP., has announced that under the new management which has purchased control of the laboratories, lipstick, rouge, face powder, bath oils and dusting powder will be added to the Maria Danica line, although the firm does not plan to deviate from its policy of a concentrated short line. The business will be continued under the same name and Mrs. Maria H. Friis-Hansen, will be retained as production manager, J. A. Reichart, president, has announced.

HINDS, INC., New York, N. Y., is featuring the new hit show broadcast over WDR, "Blind Date" starring Arlene Francis with Jimmy Wallington. Time of broadcast is every Monday night over the Blue Network.

RICHARD HUDNUT announces the addition to its staff of Mrs. Enid Edson as director of packaging. Mrs. Edson brings with her a background of original package design in a number of fields — including stationery, paper,

package containers. She has also created the packages—Early American Old Spice and Friendship Garden for Shulton, Inc.

INDEPENDENT DRUGGISTS OF CALIFORNIA, formerly known as the Independent Druggists of Southern California, have announced that their radio program now includes the participation of 37 manufacturers and distributors as compared with but five participants the first two years. The program is now broadcast over six stations.

ALFRED D. MCKELVY Co., manufacturers of "Seaforth For Men" toiletries, has announced a new advertising campaign for national magazines. The campaign featuring motion picture stars will run in full page and color, and marks the company's largest advertising campaign to date, according to Alfred D. McKelvy, president.

McKESSON & ROBBINS, INC., New York, N. Y., is using New York theatrical programs for testimonial copy by 20 theatrical stars now appearing in nine Broadway productions, for its product, Bexel, vitamin B complex. This campaign is in addition to McKesson's national schedule which ties in with stars of Paramount Pictures, Inc.

The stars and their shows include John Boles and Paula Laurence, "One Touch of Venus"; Dorothy Sarnoff and Virginia MacWatters, "Rosalinda"; Betty Garrett, "Something for the Boys"; Eric Blore, Christine Ayers, Imogene Carpenter, Senor Wences, "Ziegfeld Follies"; Arleen Whelan, Virginia Field, "The Doughgirls"; Muriel Angelus, Richard Kollmar, "Early to Bed"; Leo Carroll, "Angel Street"; Betty Garde, Celeste Holme, Alfred Drake, Joan Roberts, "Oklahoma"; Uta Hagen and Jose Ferrer, "Othello."

PINAUD, INC., New York, N. Y., toiletries manufacturers, have enrolled their entire staff in the medical and surgical care plan of Group Health Cooperative, it has been announced by Winslow Carlton, executive director of the Cooperative. According to arrangements made with the Cooperative, the entire premium for each employee will be paid by Pinaud, Inc.

POND'S EXTRACT Co.'s beauty counselor, Miss Mary Stuyvesant, who is on loan to the Girls' Service Organization for the USO, is conducting personal ap-

pearance clinics for their junior hostess groups in communities all over the country. Miss Stuyvesant covers various phases of the question, "How to make the most of yourself" in GSO Charm Sessions. Her book, "Let's Look Lovely," written especially for the girls of the GSO is now used in war plants and schools as well. In it, she outlines the basic principles of vim, vigor and good looks.

THE PROOVIT Co., Hollywood, Calif., has announced that their \$10.00 bottle of "Proovit" now contains four ounces instead of the previous two ounces of oil.

SHULTON, INC., employees gave their fifth annual revue and dance Nov. 19, at the J. F. Brandt Junior High School, Hoboken, N. J. In the absence of Wil-



George L. Schultz, vice-president of Shulton, Inc., extending a hearty welcome to Pfc. Ernest Voight, Army; Pfc. Frank Thompson, Marine veteran of Guadalcanal; and Stephen Ferrantino, S I/c of the Navy; at the fifth annual revue and dance, Nov. 19.

liam L. Shultz, president of Shulton, his son, George Shultz, vice-president, welcomed three servicemen on leave of absence from the company, who were able to attend the performance.

STANDARD BRANDS', INC., Pacific Coast salesmanager, C. N. Fishell, has been given a commission in the Navy and entered the Harvard Babson Institute unit of the Naval Supply School. Mr. Fishell, whose headquarters were in San Francisco, had been associated with Standard Brands for the past 12 years.

TRANSPAC PRODUCTS Co.'s founder, M. Kantzler, who established the flavoring firm in San Francisco, Calif., earlier this year, will re-establish his Shanghai, China, plant as soon as conditions permit. Mr. Kantzler fled to the United States just prior to the Japanese bombing of Shanghai.

J. B. WILLIAMS Co., Glastonbury, Conn., launched its first campaign on the Columbia network Sunday, Dec. 5, when it began sponsorship of William L. Shirer, CBS news analyst. At the present time the program is broadcast over 46 stations.

# PERFUMERS

BASIC MATERIALS



## Rosafolio B. A.

In these days when natural rose extractions are difficult to obtain and when the raw materials for producing a good synthetic rose is a real problem, Rosafolio offers a dependable relief.

Rosafolio B. A. while comparatively inexpensive gives a rosy character of quality.

Rosafolio B. A. can be used in any formulae requiring a rosy effect. It is particularly suitable for powders and also stable in creams.

Samples and quotations will be sent to interested manufacturers.



**BUSH**  
**AROMATICS**  
**INCORPORATED**  
136 Liberty Street  
New York, N. Y.

Many years ago we first offered fine paper boxes to cosmetic manufacturers. It is significant that since then most of the concerns with whom we began business still call upon us to meet their needs.

Despite the shortage of raw materials it is our pledge never to depart from the high standard of quality that has always been identified with KARL VOSS paper boxes.

There is no finer cosmetic container than a KARL VOSS box.

**KARL VOSS CORPORATION**

DIVISION OF SHOUF OWENS INC.

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### We Can Supply The Following Books

|   |        |
|---|--------|
| Chemical Formulary (Bennett) Vol. VI .....  | \$6.00 |
| Chemistry and Manufacture of Cosmetics (de Navarre) .....   | 8.00   |
| Cosmetic Formulary .....  | 3.75   |
| Cosmetology Jurisprudence .....   | 5.00   |
| Cream of Beauty (H. S. Redgrove) .....  | 2.00   |
| Hair Dyes & Hair Dyeing (Redgrove & Foan) ....  | 5.00   |
| How to Make and Use a Small Chemical Laboratory (Raymond Francis Yates) .....                       | 1.00   |
| Manual of Cosmetics (Lazar) .....   | 5.10   |
| Modern Cosmetics (Francis Chilson) .....  | 6.00   |
| Modern Cosmetology (Ralph G. Harry) .....   | 5.00   |
| Modern Soap Making (Thomssen & Kemp) .....  | 7.50   |
| National Formulary, VII .....   | 6.25   |
| Non-Intoxicants (Nowak) .....   | 6.00   |
| Perfumes, Cosmetics & Soaps (Wm. Poucher) Vol. II on perfumes .....                                 | 8.00   |
| Perfumes and Spices (A. Hyatt Verrill) .....  | 3.50   |
| Practical Emulsions (H. Bennett) .....  | 5.00   |
| Practical Flavoring Extract Maker (Kessler) water damaged .....                                     | 2.00   |
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| Twentieth Century Book of Recipes, Formulas and Processes .....                                     | 4.00   |
| U. S. Pharmacopoeia, XII .....  | 7.75   |
| Volatile Oils (Gildemeister & Hoffman) English Translation of "Die Atherischen Ole": Vol. III ..... | 10.00  |

### ROBBINS PUBLICATIONS BOOK SERVICE

9 E. 38th St., New York 16, N. Y.

# NEWS and EVENTS

## Atlas establishes central research laboratory near Wilmington

Establishment of a central research laboratory near Wilmington, Del., by Atlas Powder Co. was announced recently by K. R. Brown, director of research for Atlas. The establishment of the new laboratories is to allow for necessary extension of research programs vital to the war effort and to relieve the crowded conditions of present facilities. Dr. R. S. Rose, Jr., the present director of the Atlas research laboratory facilities at Reynolds, Pa., will be the director of the new central laboratory, the first unit of which is nearing completion.

## Dow Chemical Co. issues preferred stock

The Dow Chemical Company, Midland, Mich., has issued 600,000 shares of preferred stock at a \$4.00 dividend rating which has the approval of the stockholders. Approximately 60,000 of these shares will be offered in exchange for outstanding five per cent preferred stock.

## Foragers to hold its 47th annual banquet

The Foragers of America, the oldest organization of toilet goods salesmen in America, will hold its 47th annual banquet Saturday evening, January 8, 1944. The place of the banquet has not yet been determined. The annual meeting and election of new members to the board of governors is to be held Wednesday, December 29, at noon.

## Advisory spice committee appointed by OPA

A Spice Industry Advisory Committee has been formed to meet and advise with the Food Price Division of the Office of Price Administration on matters pertaining to the price of the products. The members of the committee are:

J. B. Bond, Wixon Spice Co., Chicago, Ill.; R. H. Cardwell, Jr., C. W. Antrim & Sons, Richmond, Va.; I. B. Catz, Catz American Co., New York,

N. Y.; V. H. Fischer, Dodge & Olcott, New York, N. Y.; Emil Frank, Frank Tea & Spice Co., Cincinnati, Ohio; Allen L. Grant, C. T. Wilson Co., New York, N. Y.; L. W. Jones, McCormick & Co., Baltimore, Md.; William M. Shields, David S. Evans Coffee Co., St. Louis, Mo.; William G. Volkman, A. Shilling & Co., San Francisco, Calif.; J. Max Weyer, Van Loan & Co., New York, N. Y.

## Annual meeting and election held by New York Board of Trade

The New York Board of Trade, Inc., held its annual meeting and election Tuesday, Dec. 14, in the grand ballroom of the Hotel Astor, New York City. Mr. L. F. Livingston, manager of the agricultural extension division of E. I. du Pont de Nemours & Co., Inc., addressed the members on "The Magic of Science."

## Harry Knight named sales manager of Creative Printmakers Group

Creative Printmakers Group, New York City, has announced the formation of a sales department under the management of Harry Knight, who recently completed a government assignment. Mr. Knight's coming to the firm will tend to fill the gap left by the induction into the armed services of two of its active partners, Staff Sergeant Hyman Warsager and Private Anthony Velonis.

## J. H. Wright appointed department director of Monsanto

Appointment of J. Handly Wright, of Birmingham, Ala., as director of the department of industrial and public relations of Monsanto Chemical Co., effective December 1, has been made by Charles Belknap, president.

For the past four and one-half years Mr. Wright served as executive vice-president of Associated Industries of Alabama. In his new position with Monsanto he has charge of advertising, public relations, industrial and labor relations, safety program and company publications.

## Harris Whittaker joins Elizabeth Arden

Harris Whittaker, formerly with the Richard Hudnut Co., is now with Elizabeth Arden, as assistant to the president.

## Diamond Alkali Sales Corp. absorbs distributors

Diamond Alkali Sales Corp., Pittsburgh, Pa., has taken over and assimilated into the parent organization five heavy chemical firms who had formerly acted as distributors for Diamond alkalis. Consumers Chemical Co., 12 S. 12th St., Philadelphia, Pa., is now a part of the organization with C. F. Wolters, Jr., as district manager. Other firms taken over include the Tri-State Chemical Co., 668 S. Main St., Memphis, Tenn.; E. A. Jones, manager; Sunshine Soda Co., Penton Bldg., Cleveland; Central West Chemical Co., Redick Tower Bldg., Omaha, V. M. Jacobsen, manager; and Buckeye Soda Products Co., 38 Main St., Cincinnati, L. S. Wahl, manager.

## D.C.A.T. Section elects new executive committee at annual meeting

The Drug, Chemical and Allied Trades Section of the New York Board of Trade held its 53rd annual meeting and election at the Drug and Chemical Club, New York City, November 16, with over 100 executives present. Victor E. Williams, director of sales of Monsanto Chemical Co., presided at the meeting featured by the address of Mr. Julius Henry Cohen, who spoke on the subject of Government War Contract Cancellations.

Mr. John J. Toohy, manager of distribution for B. R. Squibb & Sons, was elected the Section's representative to serve on the board of directors of the New York Board of Trade for the coming year.

With the approval of the report of the nominating committee, presented by its chairman, Philip M. Dinkins, the following individuals were elected to serve on the executive committee for the coming year. At the first meeting of this committee, which will be held

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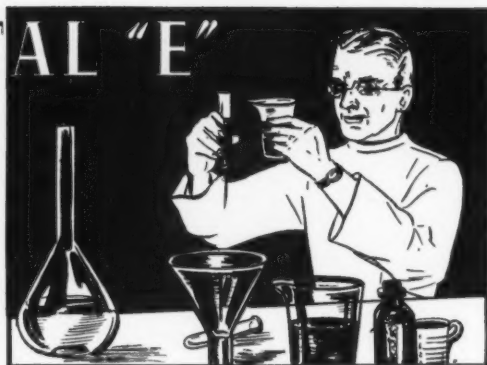
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shortly, the Section's officers for next year will be elected: Harold M. Altshul, Ketchum & Co., Inc.; Carl M. Anderson, Merck & Co., Inc.; William H. Berg, Winthrop Chemical Co.; Carle M. Bigelow, Calco Chemical Div., American Cyanamid Co.; Hugh S. Crosson, McKesson & Robbins, Inc.; James DeCesare, White Laboratories, Inc.; Grover C. Hollings, Eli Lilly & Co.; R. J. Ingram, Bristol Myers Co.; Elvin H. Killheffer, E. I. duPont de Nemours & Co., Inc.; Arthur J. Kinsman, Purepac Corp.; Charles L. Lightfoot, Anchor Hocking Glass Corp.; Robert B. Magnus, Magnus, Mabee & Reynard, Inc.; Guy L. Marsters, Norwich Pharmacal Co.; Paul Miller, International Cellulose Products Co.; Harold D. Pomeroy, G. S. Stoddard & Co., Inc.; Robert J. Quinn, The Mathieson Alkali Works; J. P. Remensnyder, Heyden Chemical Corp.; Lloyd I. Volckening, The Ivers-Lee Co.; William J. Weed, Niagara Alkali Co.; E. T. T. Williams, Becton, Dickinson & Co.

#### **"Good luck" tokens sent to armed forces by McKesson & Robbins**

Sterling silver "good luck" pocket pieces, each one individually engraved with the name of the recipient, have been sent out as Christmas and New Year's gifts by McKesson & Robbins, Inc., to the more than 1200 former company employees now in military service. The total number receiving the tokens includes 21 women auxiliaries.

#### **Hercules shows new chemical uses at Chemical Industries Exposition**

Hercules Powder Co.'s exhibit at the Exposition of Chemical Industries in Madison Square Garden, New York City, December 6 to 11, portrayed new industrial uses for chemicals and the company's chemical products. The exhibit also included a colored map, in low relief, of "Hercules Land," showing different chemical products the company manufactures and sections of the chemical world each comes from.

#### **Leon Falk, Jr., named chief of FDA's Fats and Oils branch**

Leon Falk, Jr., vice-president of the Commodity Credit Corporation, has been named chief of the Fats and Oils branch, Food Distribution Administration, to succeed Charles T. Prindeville, who has returned to private business, the War Food Administration has announced. The appointment was effective Dec. 1.

Mr. Falk entered government service with the Office of Coordinator of Inter-American Affairs shortly after the out-

break of war, and later became chief of the Fats and Oils section of the Board of Economic Warfare. Before coming to Washington, he was treasurer of Falk and Co., Pittsburgh, manufacturers of oils and greases.

Mr. Prindeville has returned to the vice-presidency of Swift and Company, Chicago.

#### **G. W. Sands, formerly with Arden, joins Hudnut**

G. W. Sands, formerly with Elizabeth Arden, has joined the Richard Hudnut Company, in the purchasing department.

#### **Philadelphia College of Pharmacy plans post-war seminar**

Plans for a series of post-war seminars in pharmacy have been announced by Dr. Ivor Griffith, president of the Philadelphia College of Pharmacy and Science. The courses will be planned primarily for returning servicemen as an extension program to help prepare them for the resumption of civilian practice in their profession. Civilian pharmacists who desire to bring their professional knowledge up to date may also attend.

#### **Flavoring Extract Manufacturers' Ass'n sets dates for meeting**

The Flavoring Extract Manufacturers' Association, at a meeting of the Executive Committee held at the Hotel Pennsylvania, November 5, unanimously agreed to hold the Annual Business Meeting of the Association at the Hotel Pennsylvania, New York, N. Y., on May 15 and 16, 1944. This meeting will be streamlined and confined strictly to two days.

The Association is advising members of this meeting so far in advance to permit making reservations which everyone knows is very difficult these days.

#### **N.W.D.A. appoints committee chairmen for 1943-44 term**

Lace I. Fitschen, president, National Wholesale Druggists' Ass'n, has announced the appointment of three committee chairmen to serve the association during 1943 and 1944. They are J. E. Murphy, manager of the Providence, R. I., division, McKesson & Robbins, Inc., credits and collection committee; J. D. Slater, manager and merchandising manager, Van Vleet-Ellis division, McKesson & Robbins, Inc., Jackson, Miss., sales management committee; and H. W. Adkins, executive vice-president of Yahr-Lang, Inc., Milwaukee, Wis., reappointed chairman of the statistical research committee.

#### **R. G. Sappenfield elected member of Controllers Institute**

R. G. Sappenfield, president and treasurer of Campana Corp., Batavia, Ill., has been elected to membership in the Controllers Institute of America, a technical and professional organization of controllers devoted to improvement of controllership procedure.

#### **Merck & Company employees awarded Army-Navy "E" for second time**

Under Secretary of War Robert P. Patterson has announced that all three plants of Merck & Co., Inc., manufacturing chemists, have won the Army-Navy Production Award for the second time. Officials of the company announced that in accordance with the expressed desire of the War Department, no ceremony will be held to celebrate the winning of the second Army-Navy "E" Award.

#### **H. Hutchins joins Hillman Women's Group as advertising manager**

Harold Hutchins, executive editor of *American Druggist*, has resigned to become advertising manager of the Hillman Women's Group. He assumed his new duties on December 6.

Starting out as a retail druggist in Philadelphia, he later joined the sales department of a pharmaceutical manufacturer. Then followed several years with the *Druggist Circular* in its advertising department, after which he was associated with the national advertising department of the Scripps-Howard newspapers.

#### **California Flavoring Extracts Mfrs. hold monthly meeting**

The Flavoring Extracts Manufacturers' Ass'n of California held its monthly dinner meeting at the Los Angeles Athletic Club, Los Angeles, Calif., November 18. In the absence of Charles S. Marston and Lane Guthrie, president and vice-president, respectively, A. E. Evans, secretary, presided.

Dr. C. D. Carus, professor of economics at the University of Southern California and a member of the National Board of Economic Warfare, was guest speaker, as well as G. C. Dohm, Los Angeles manager of the U. S. Industrial Chemical Co. The meeting was well attended.

#### **Fair Trade Council holds annual meeting in New York City**

The benefits which accrue to manufacturers, distributors and consumers under the Fair Trade laws were discussed and emphasized at the annual meeting of the American Fair Trade Council,

held at the Waldorf-Astoria Hotel, New York City, on November 5. More than 56 companies were represented. John W. Scott, secretary of the Bissell Carpet Sweeper Co., and president of the Council, presided.

Among the companies represented at the meeting were: Eastman Kodak Co., Elizabeth Arden, Lehn & Fink Products Co., McKesson & Robbins, Inc., and Standard Brands, Inc.

#### **F. J. Curtis elected vice-president of Monsanto Chemical Company**

Francis J. Curtis was elected recently a vice-president of Monsanto Chemical Co., according to announcement by Charles Belknap, president.

In his new capacity Mr. Curtis will be in charge of Monsanto's development here and abroad, including general research and sales development.

#### **Under-selling of soap brings suit against Utah drug stores**

While OPA officials in Utah are trying hard to keep prices from skyrocketing, as they are in other states, the Utah State Trade Commission has filed a suit against certain drug stores there

to prevent their selling soap below what it ought to be in the view of the fair trade laws of that state. The suit is described as of a friendly character, for it is claimed that the OPA ceiling is below the state code's markup figure.

#### **L. I. Fitschen elected to Chamber of Commerce committees**

L. I. Fitschen, president of the National Wholesale Druggists' Ass'n, has been named a member of the policy and projects committee and the budget committee of the Oklahoma City Chamber of Commerce for 1944. Mr. Fitschen is vice-president and general manager of the Alexander Drug Company, Oklahoma City, Okla.

#### **R. V. Coghlan named assistant to L. M. Van Riper, McKesson & Robbins**

Reginald V. Coghlan, formerly assistant general sales manager of the Beacon Chemical Corp., Philadelphia, Pa., has been named assistant to L. M. Van Riper, vice-president and advertising director of McKesson & Robbins, Inc. Previously, Mr. Coghlan served for 17 years with the sales promotion department of the Gulf Oil Corp.


#### **G. F. DuBois, vice-president of Monsanto, awarded Perkin Medal**

The American Section of the Society of Chemical Industry has announced the election of Gaston F. DuBois, vice-president of Monsanto Chemical Co., St. Louis, to receive the Perkin Medal in recognition of his outstanding work in applied chemistry. Presentation will be made at a dinner meeting in New York on Friday, Jan. 7.

#### **Additional Hercules Powder Co. employees wear "E" pin**

More than 1800 men and women of Hercules Powder Company's home office and experiment station are now entitled to wear the Army-Navy "E" pin, it was announced recently by Charles A. Higgins, president. Under the rules of the War Department governing "E" awards, employees of the central office of a corporation are given "E" awards, after a majority of the employees has received the award.

Hercules has raised Army-Navy "E" flags at its Radford Ordnance Works, and at its Kenvil, N. J., Parlin, N. J., Hopewell, Va., Port Ewen, N. Y., Belvidere, N. J., Hercules, Calif., plants.



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### **Bourjois hold annual sales convention in New York**

The annual sales convention for all salesmen and women of Bourjois, Inc., and Barbara Gould, Inc., was held at the Empire State Club, 34th Street and Fifth Ave., New York, N. Y., which began Monday, Nov. 29. About 25 salesmen from all over the country were here to discuss plans for the coming year.

### **War work a major part of Standard's executives**

Executives of the Standard Specialty & Tube Co., New Brighton, Pa., are busily engaged in furthering the war effort in various interesting ways. J. H. Heidegger devotes not less than one day each week to service in the U. S. Coast Guard. The close proximity of New Brighton to the great industrial center of Pittsburgh which lies at the mouth of the Ohio River into which flow several tributaries calls for constant vigilance on the part of the Coast Guard. David F. Lindsay who serves as an air raid warden also worked on the Community Chest Drive. Ralph Reed was publicity director for the second and third War Loan drives and was also campaign director of the Beaver Valley Community Chest. Roland Kenah devotes his time to the supervision of all war work handled by the company as well as its other activities. R. I. Kenah, dean of the collapsible tube industry and president of the company, devotes much of his time to the direction of the affairs of the New Brighton bank of which he is the head.

### **Fake perfume and labels on well-known brands**

An investigation made by detectives sent out from the District Attorney's office inexpensive perfumes that had been scented, colored and labeled in simulation of nationally known products showed that these had been sold as the true perfume of Chanel, Guerlain, Patou and others.

While this misrepresentation is not prevalent throughout the year as a rule, at Christmas time there always seems to be more or less of this misrepresentation. It is well to be on the lookout for such people, and also to buy perfumes only at the reputable stores.

### **Gripsholm brings Far Eastern manager of Colgate-Palmolive-Peet**

One of the many passengers of the exchange steamer, Gripsholm, that arrived in New York recently from its long voyage from the Far East was W. T. Alexander, Far Eastern manager of the Colgate-Palmolive-Peet Co. Mr.

Alexander had been at liberty for some months in Shanghai after hostilities broke out before being interned at Pootung Camp.

He was crowded into a single room with 126 other men, Mr. Alexander said, and in all 1100 men were jammed into the camp, which occupied an abandoned tobacco warehouse across the Whangpo River from the Shanghai bund. He said that food was very bad.

"Several times the men in the camp preferred to go hungry rather than eat the food that the camp kitchen was forced to serve.

"We got to thinking that the United States was not doing anything." He added, however, that "nobody doubted the outcome of the war, but it seemed as though we were making awful slow progress."

### **Canadian representatives of Bourjois and Barbara Gould here**

Messrs. Badger and Dwyer of Palmer Ltd., Montreal, Canada, have been in New York the last week in November to discuss with the heads of Bourjois, Inc., and Barbara Gould. Mr. Badger is general manager of Palmer, Ltd., and Mr. Dwyer is sales manager.

### **N.W.D.A. president speaks on post-war plans at convention**

George van Gorder, McKesson & Robbins, Inc., president of the National Wholesale Druggists' Ass'n., chose as the subject of his speech before the association's war-time conference early last month, "An American Charter: Free Enterprise." In opening his speech, Mr. van Gorder declared that although the business world generally associates post-war planning with research on new products and study of new methods of doing business, these practical methods of approach cannot be accomplished without a confidence that certain basic concepts will endure, the most important concept being freedom. As a whole, the various war agencies, according to the speaker, have done a commendable job.

Putting business on the soundest possible basis today is the most effective contribution to post-war planning the drug industry can make, the speaker stated.

War-time conditions have taught industry to eliminate unnecessary practices and to streamline operations. It is expected that these economies will continue in the post-war period with the prospect of higher wage and salary levels and higher fixed costs, especially taxes. The speaker predicted that the selection and training of personnel and the modernization of equipment for maximum efficiency will be other post-war economies.

Gross profit will take on a new significance and heavy pressure to reduce distributing costs in all lines of business may be expected, said Mr. van Gorder.

In defining the freedom necessary for the accomplishment of these post-war plans, Mr. van Gorder declared, "We do not ask for freedom to lean upon a subsidized shovel but for freedom to carry on in the post-war world, adapting ourselves to liberalized peace-time conditions as we now are meeting the emergency situation of a nation at war."

### **W. M. Evarts retires from Spencer Kellogg & Sons**

William M. Evarts, assistant treasurer and assistant secretary of Spencer Kellogg & Sons, who as an employee witnessed the growth of the company to its present position, has retired after approximately 46 years of service. He is 77 years old and the oldest employee in the number of years of service. Mr. Evarts was honored by Spencer Kellogg executives at a testimonial dinner Sept. 9 at Hotel Statler, Buffalo. Victor A. Acer, vice-president of the company, was toastmaster.

### **C. S. Marston on trip to Northwest for Neil Flavoring Laboratories**

Charles S. Marston, sales manager of the Neil Flavoring Laboratory, Los Angeles, Calif., and president of the Flavoring Extract Manufacturers' Ass'n of California, is on a business and pleasure trip to the Northwest. He expects to travel as far as Portland, Ore.

### **AOAC discusses drug and cosmetic tests**

Among the subjects discussed at the recent meeting of the Association of Official Agricultural Chemists were a number of tests for drugs and cosmetics. Out of 14 topics discussed in the synthetic drug field analytical methods of barbiturates and dedormid were recommended for tentative adoption.

In the cosmetic field, a new topic, cosmetic skin lotions, was placed on the agenda for future study. Some of the more common subjects on the cosmetic list were dropped due to the fact that men studying them were devoting their time to war work or were in the armed services. These included common ash constituents, peroxides in cosmetics, beta-naphthol in hair lotion, dentifrices and mouth washes, lip make-up and rouges, and eye lotions. Reports on five subjects relating to the cosmetic industry were presented, four of which have already been published. The four are: Arsenic in hair lotions; salicylic acid in hair lotions; hair dyes



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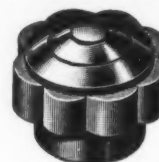
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and rinses; mascara, eye-brow pencils and eye shadows; and nail cosmetics.

The convention adopted, the first of its kind, methods for tests dealing with sulfidex and depilatory powders and paraphenylenediamine.

#### **Advertising Club hold benefit at Gourielli**

Princess Helene Rubinstein Gourielli, on Dec. 3, opened her salon to the advertising women of New York for a benefit cocktail party for the Merchant Marine. At the party, which by the way, was a great success was a young marine with his bride, and according to the old tradition, "Something Blue" was presented to her with the compliments of the Princess.

Some 350 people were present which netted the Merchant Marine approximately \$700. An entrance fee was charged each guest of \$1.00 and each cocktail was sold for fifty cents each.

Although the party was scheduled for from 5:00 to 7:00, the assembled group were having such a good time that it was long after ten o'clock before the doors were closed.

#### **OPA boards to supply fats and oils for external drugs**

Although cosmetic users of fats and oils will continue to be supplied through the Fats and Oils branch of WFA, the Office of Price Administration plans to amend its regulations in the near future to transfer authority over the fats and oils supply for external drugs from the WFA Fats and Oils branch to OPA local boards. Fats and oils for internal drugs have always been under the jurisdiction of OPA boards. The amendment is due to the new OPA registration forms for all rationed foods used in the manufacture of drugs.

#### **Constance Luft Huhn entertains at the Waldorf**

Constance Luft Huhn, president of George W. Luft Co., Long Island City, N. Y., entertained the New York press at a party for Tantee at the Waldorf-Astoria on Dec. 1.

Mrs. Huhn had invited several fine people to foretell the future, bearing out the theme of the party, "What Does the Future Hold for You?"

Harry Haus, vice-president in charge of sales, and Standly Park, assistant sales manager, assisted Mrs. Huhn.

#### **Bims will hold its annual dinner in January**

The Bims organization will hold its annual mid-winter get-together dinner on January 19, at the Hotel Lafayette, New York, N. Y.

#### **E. H. Little, pres. Colgate Palmolive-Peet addresses meeting**

Edward H. Little, president of Colgate-Palmolive-Peet Co., was the guest speaker at the monthly meeting of the Newspaper Representative Association at the Hotel Lexington, New York, on November 15th.

#### **Jean Vivaudou moves to larger quarters**

Jean Vivaudou Co., New York, N. Y., has leased a three-story building at 146-50 West 63rd Street, containing about 22,000 sq. ft. of floor space. Vivaudou plan to remodel the building and equip it to handle increased business.

#### **Gerald John Mansfield**

It is with deepest regret and sympathy that we record the death, in a fatal flying accident in Canada, of Pilot Officer Gerald John Mansfield, R.A.F. V.R., younger son of S. R. Mansfield, director of Polak & Schwarz, Ltd., England.

This is the second family loss sustained by Mr. and Mrs. Mansfield. Their elder son, Sub-Lieut. Gordon Sidney Mansfield, R.N.V.R., was killed last November while serving on an aircraft carrier. He was 21 years of age, educated at Chigwell School and in Holland. He was well known to a number of friends in the perfumery, flavoring and allied trades, having acted as junior representative in London and the Southern Counties, and also in the Irish Free State and Northern Ireland.

Gerald, aged 20, was educated at Bancroft School and Christ's College, Cambridge. He was studying, before the war for a degree in chemistry. In 1941 he joined the Cambridge University Air Squadron, and in July of this year was awarded his "wings" and commission. Our deepest sympathy goes to Mr. and Mrs. Mansfield on their loss.

#### **V. Chapin Daggett**

V. Chapin Daggett, founder and director of Daggett & Ramsdell, New York, N. Y., died at his home in Kew Gardens, N. Y., Dec. 9, at the age of 84. He had been ill for more than a year.

A native of South Weymouth, Mass., Mr. Daggett was graduated from the Massachusetts College of Pharmacy in 1885 and in 1890 he and a classmate, the late Clifford Ramsdell, opened a drug store in New York City. Soon

#### **William Kelly retires as sales manager of Roger & Gallet**

William Kelly, who for the past sixteen years has been associated with Roger & Gallet, retired as sales manager to take effect December 31. Mr. Kelly is well known to the buyers in the trade.

#### **E. A. Nicol named personnel for United Drug**

Eric A. Nicol has been elected vice-president of United Drug, Inc., in charge of personnel. Mr. Nicol was formerly chief of the Lend Lease Mission to Australia, serving in that capacity from 1942 until his resignation early this year to join the staff of United Drug, Inc.

## **Obituaries**

Mr. Daggett began selling a cold cream made from his own formula and five years later Daggett and Ramsdell found it necessary to move to larger headquarters. Meanwhile he added other cosmetics and shaving preparations to the line. Mr. Daggett retired as owner of the business in 1929, continuing as a director.

Surviving are a granddaughter, Mrs. Hamilton W. Stiles, and a sister, Mrs. Helen Chase.

#### **Robert J. Crawford**

Robert J. Crawford, of the American Hard Rubber Co., New York, N. Y., died Dec. 8, at the age of 69. Mr. Crawford had been the New York representative for the company for many years. He made his home at 46 Booraem Ave., Jersey City. Surviving are three sisters, Ida J., Adelaide E. and Mrs. John Kemp.

#### **Mrs. Maria E. Corson**

Mrs. Maria E. Corson died at her home in Hewlett, N. Y., Nov. 30, at the age of 98. She was the mother of John A. Corson, an officer of Dodge and Olcott Co., New York, N. Y., and one of its oldest employees, having first become associated with D & O in 1900 when they were located at 86 and 88 William Street, near Maiden Lane.

#### **Charles E. Joannes**

Charles E. Joannes, chairman of the board of directors of Ben Hur Products Co., Inc., and long a resident of Los Angeles, Calif., died recently of a heart attack at the age of 67. He was an original member of the Rotary Club International. Surviving are a widow, daughter and grand-daughter.

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## Market Sensitive to Possible Changes

**B**ECAUSE OF SWIFTLY moving developments in the war and indications of a further easing in the position of certain basic materials, essential oils, aromatic chemicals and various other products displayed a more sensitive tone. A noticeable slackening in trade was noted in many articles for a time immediately following rumors of an early peace in Europe.

Small holdings of imported essential oils and a moderate demand served to keep quotations firm at recent advances. Interest in aromatic chemicals was quite active. Available supplies were at a low ebb, however, and makers were confronted with the problem of meeting demands, and at the same time obtaining raw materials to replenish the small supplies of aromatics.

### GLYCERINE STOCKS PLENTIFUL

In line with earlier predictions, greater quantities of glycerine were allocated for December. Several uses that had heretofore been prohibited were permitted. In spite of the more liberal policy on the part of the Government in releasing this strategic item, it is understood that stocks in refiners' hands have been increasing, and will under present circumstances continue to increase unless a further easing in regulations is witnessed.

### TRADE REGULATION A HANDICAP

Dealers in the essential oil trade have been seriously handicapped by regulations affecting domestic oils. For the past several weeks or more prominent houses have been forced to cancel prices because of unsatisfactory price ceilings. Small lot transactions caused certain interests to jump to the sudden idea that ceiling prices were being ig-

nored by major houses, with the result that OPA officials started informal discussions with members of the industry on the advisability of issuing, as soon as possible, a regulation that will halt what they termed "a growing trend toward development of a black market in domestic oils."

### OPA ACTION WELCOME

Unable to get the necessary results any other way, houses long identified with the sale of essential oils and aromatic chemicals will welcome any sort of action by OPA in order that they may meet rising costs in the country and resume selling various articles that are American made at a reasonable margin of profit.

The hint of black market operations from Washington, however, in discussing a plan to make it possible for dealers to sell at more reasonable prices as compared with rising costs was a somewhat different method than the one used in the botanical drug field, when OPA completely lifted price regulations governing the sale of the latter products. Natural sassafras oil is in an unusually strong position. One major producer, it is learned, is only running its plant to keep certain old customers supplied. There will be little oil to be had for new customers over the coming year because of the manpower shortage.

### BUYERS WARY OF OVERLOADING

Approach of the inventory period as well as the possibility of an early ending of the conflict in Europe caused buyers of industrial chemicals, some of which are used in soap and a host of other manufactured products, to proceed with greater caution than ever before. Despite much post-war plan-

ning no one seems willing to take a chance of being long on stock should the conflict come to a sudden end.

### DISTURBED CONDITION IN GUMS

Various gums displayed a mixed tone. Myrrh was easier. Some lots of Siam benzoin were disposed of, but the purchases left the spot market virtually bare of materials due to the inability to replace depleted supplies. Karaya was featured by a strong tone notwithstanding the appearance of fresh arrivals from India. The situation with regard to tragacanth seems highly clouded. Because of mixed reports from local houses, it is extremely difficult to get a clear picture of the local market. Reports from at least four prominent houses indicated that prices at Iran were advancing, while one house indicated the primary market was weak. Local suppliers reporting an extremely firm market explained that they were reserving current stocks in the face of mounting replacement costs.

### BEANS IN SCANT SUPPLY

While every effort is being made to secure further shipments of Bourbon vanilla beans from Madagascar, it is extremely difficult to state whether such attempts will prove successful, since it is understood that vanilla beans are fairly well down the list of essential items to be shipped from the island. It may be a matter of many months before fresh lots of beans will be permitted to be shipped to the United States. Meanwhile the few remaining lots out of the one hundred or more tons that arrived on a direct steamer from Madagascar are being reserved by local houses who are particularly anxious to keep regular consumers supplied in the event that they do not succeed in getting new lots of beans out of the Island. The new crop of Mexican beans is several months away.

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| Sweet True                  | 2.00@   | 2.25   |
| Apricot Kernel              | .50     | Nom'l  |
| Amber, rectified            | 1.35    | Nom'l  |
| Angelica Root               | 125.00@ | 150.00 |
| Anise, U. S. P.             | 3.85    | Nom'l  |
| Imitation                   | 1.75@   | 2.10   |
| Aspic (spike) Span.         | 5.00@   | 5.25   |
| Avocado                     | .90@    | .95    |
| Bay                         | 1.75@   | 2.50   |
| Bergamot                    | 25.00   | Nom'l  |
| Brazilian                   | 10.00@  |        |
| Artificial                  | 4.00@   | 9.25   |
| Birch, sweet                | 3.50@   | 5.25   |
| Birchar, crude              | 2.25    | Nom'l  |
| Birchar, rectified          | 4.25    | Nom'l  |
| Bois de Rose                | 5.10    | Nom'l  |
| Cade, U. S. P.              | 1.50@   | 1.75   |
| Cajeput                     | 2.00@   | 2.75   |
| Calamus                     | 22.50@  | 35.00  |
| Camphor, "white," dom.      | .30@    | .35    |
| Cananga, Java, native       | 10.00@  | 11.25  |
| Rectified                   | 11.50@  | 13.00  |
| Caraway                     | 15.50@  | 17.50  |
| Cardamon                    | 30.00@  | 35.00  |
| Cassia, rectified, U. S. P. | 12.00   | Nom'l  |
| Cedar leaf                  | 1.25@   | 1.30   |
| U. S. P.                    | 2.00@   | 2.10   |
| Cedar wood                  | .80@    | .95    |
| Celery                      | 24.00@  | 26.00  |
| Chamomile                   | 150.00  | Nom'l  |
| Cinnamon                    | 10.50@  | 32.00  |
| Citronella, Ceylon          | 1.05@   | 1.25   |
| Java                        | 3.25    | Nom'l  |
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| Turkish                     | 5.25@   | 6.00   |
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| Substitute                  | .55@    | .60    |
| Juniper Berries             | 15.00   | Nom'l  |
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| Laurel                      | 5.00    | Nom'l  |
| Lavandin                    | 7.75@   | 8.25   |
| Lavender, French            | 10.00@  | 12.00  |
| Lemon, Calif.               | 3.25@   |        |
| Lemongrass                  | 1.05@   | 1.25   |
| Limes, distilled            | 6.25@   | 7.75   |
| Expressed                   | 11.00@  | 11.75  |
| Linaloe                     | 3.75@   | 4.10   |
| Lavage                      | 95.00   | Nom'l  |
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| Neroli, Bigarde P.          | 340.00  | Nom'l  |
| Petale, extra               | 325.00  | Nom'l  |
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| Opopanax                    | 3.00    | Nom'l  |
| Orange, bitter              | 4.50@   | 5.00   |
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| Sage, Clary            | 40.00  | Nom'l |
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| Bourbon type           | 18.00@ | 20.00 |

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| Lavender     | 28.00   | Nom'l  |
| Lemon        | 40.00@  | 55.00  |
| Lime, ex.    | 100.00@ | 150.00 |
| Distilled    | 50.00@  | 67.00  |
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| Acetophenone            | 1.60@  | 1.75  |
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| C 9                     | 13.25@ | 15.00 |
| C 10                    | 7.75@  | 12.00 |
| C 11                    | 11.50@ | 15.00 |
| C 12                    | 7.20@  | 8.50  |
| Aldehyde C 8            | 22.50@ | 28.00 |
| C 9                     | 31.50@ | 32.00 |
| C 10                    | 22.00@ | 29.00 |
| C 11                    | 22.00@ | 26.00 |
| C 12                    | 25.00@ | 30.00 |
| C 14 (so called)        | 9.00@  | 9.50  |
| C 16 (so called)        | 8.25@  | 9.00  |
| Amyl Acetate            | .50@   | .75   |
| Amyl Butyrate           | .90@   | 1.10  |
| Amyl Cinnamate          | 4.50@  | 5.80  |
| Amyl Cinnamate Aldehyde | 2.75@  | 5.00  |
| Amyl Formate            | 1.00@  | 1.75  |
| Amyl Phenyl Acetate     | 3.75@  | 4.00  |
| Amyl Salicylate         | .85@   | 1.00  |
| Amyl Valerate           | 2.00@  | 2.75  |
| Anethol                 | 1.85@  | 2.25  |
| Anisic Aldehyde         | 3.35@  | 4.00  |
| Benzophenone            | 1.15@  | 1.30  |
| Benzyl Acetate          | .70@   | 1.00  |
| Benzyl Alcohol          | .75@   | 1.00  |
| Benzyl Benzoate         | 1.10@  | 1.65  |
| Benzyl Butyrate         | 2.25@  | 3.00  |
| Benzyl Cinnamate        | 5.15@  | 6.00  |
| Benzyl Formate          | 3.75   | Nom'l |
| Benzyl-Iso-eugenol      | 10.25  | Nom'l |
| Benzylidenacetone       | 2.25@  | 3.40  |
| Borneol                 | 1.80   | Nom'l |

|                                |        |        |
|--------------------------------|--------|--------|
| Bornyl Acetate                 | 2.00   | Nom'l  |
| Bromstyrol                     | 5.00   | Nom'l  |
| Butyl Acetate                  | .11@   | 14 1/2 |
| Cinnamic Acid                  | 3.75@  | 4.50   |
| Cinnamic Alcohol               | 3.25@  | 4.00   |
| Cinnamic Aldehyde              | 1.65@  | 1.75   |
| Cinnamyl Acetate               | 10.40  | Nom'l  |
| Cinnamyl Butyrate              | 12.00@ | 14.00  |
| Cinnamyl Formate               | 10.00@ | 13.00  |
| Citral, C. P.                  | 3.50@  | 4.00   |
| Citronellol                    | 6.50@  | 7.00   |
| Citronellyl Acetate            | 6.75   | Nom'l  |
| Coumarin                       | 3.00@  | 3.50   |
| Cuminic Aldehyde               | 8.00@  | 11.25  |
| Diethylphthalate               | .24@   | .33    |
| Dimethyl Anthranilate          | 4.55@  | 5.00   |
| Ethyl Acetate                  | .25@   | .50    |
| Ethyl Anthranilate             | 5.75@  | 7.50   |
| Ethyl Benzoate                 | .90@   | 1.15   |
| Ethyl Butyrate                 | .75@   | .90    |
| Ethyl Cinnamate                | 3.25@  | 3.75   |
| Ethyl Formate                  | .60@   | 1.00   |
| Ethyl Propionate               | .80    | Nom'l  |
| Ethyl Salicylate               | .90@   | 1.00   |
| Ethyl Vanillin                 | 5.25@  | 6.00   |
| Eucalyptol                     | 3.50   | Nom'l  |
| Eugenol                        | 2.75@  | 3.25   |
| Geraniol, dom.                 | 3.85@  | 5.25   |
| Geranyl Acetate                | 3.50@  | 4.00   |
| Geranyl Butyrate               | 6.00@  | 6.85   |
| Geranyl Formate                | 6.85@  | 8.25   |
| Heliotropin, dom.              | 3.35@  | 6.00   |
| Hydrotopic Aldehyde            | 15.00@ | 18.00  |
| Hydroxycitronellal             | 7.75@  | 10.00  |
| Indol, C. P.                   | 26.50@ | 30.00  |
| Iso-borneol                    | 1.00@  | 1.10   |
| Iso-butyl Acetate              | 1.25@  | 2.00   |
| Iso-butyl Benzoate             | 1.65@  | 2.70   |
| Iso-butyl Salicylate           | 2.70   | Nom'l  |
| Iso-eugenol                    | 4.00@  | 4.85   |
| Iso-safrol                     | 3.00   | Nom'l  |
| Linalool                       | 7.75   | Nom'l  |
| Linalyl Acetate 90%            | 8.75@  | 10.00  |
| Linalyl Anthranilate           | 15.00@ |        |
| Linalyl Benzoate               | 10.50@ |        |
| Linalyl Formate                | 9.00@  | 12.00  |
| Menthyl, Japan                 | 16.00  | Nom'l  |
| Chinese                        | 16.00  | Nom'l  |
| Synthetic                      | 15.75  | Nom'l  |
| Methyl Acetophenone            | 1.55@  | 1.80   |
| Methyl Anthranilate            | 2.60@  | 2.80   |
| Methyl Benzoate                | .70@   | 1.10   |
| Methyl Cellulose, f.a.b. ship- |        |        |
| ping point                     | .60    | Nom'l  |
| Methyl Cinnamate               | 2.25@  | 3.50   |
| Methyl Eugenol                 | 3.50@  | 6.75   |
| Methyl Heptenone               | 3.25   | Nom'l  |
| Methyl Heptene Carbonate       | 40.00@ | 60.00  |
| Methyl Iso-eugenol             | 5.85@  | 10.00  |
| Methyl Octene Carbonate        | 24.00@ | 30.00  |
| Methyl Paracresol              | 2.50   | Nom'l  |
| Methyl Phenylacetate           | 3.50@  | 4.00   |
| Methyl Salicylate              | .35@   | .38    |
| Musk Ambrette                  | 4.25@  | 9.00   |
| Ketone                         | 4.40@  | 9.70   |
| Xylene                         | 1.65@  | 2.50   |
| Neroline (ethyl ether)         | 2.00@  | 3.15   |
| Paracresol Acetate             | 2.50   | Nom'l  |
| Paracresol Methyl Ether        | 2.60@  | 3.50   |
| Paracresol Phenyl-acetate      | 6.50@  | 8.50   |
| Phenylacetaldehyde 50%         | 3.00@  | 3.75   |
| 100%                           | 4.50@  | 5.00   |
| Phenylacetic Acid              | 3.00@  | 3.75   |
| Phenylethyl Acetate            | 3.85@  | 5.00   |
| Phenylethyl Alcohol            | 2.50@  | 3.00   |
| Phenylethyl Anthranilate       | 16.00@ |        |

|                          |        |       |
|--------------------------|--------|-------|
| Phenylethyl Butyrate     | 5.10@  | 7.25  |
| Phenylethyl Propionate   | 4.25@  | 6.00  |
| Phenyl Formate           | 12.50@ | 18.00 |
| Phenyl Valerianate       | 16.00@ | 17.50 |
| Phenylpropyl Acet.       | 10.00  | Nom'l |
| Santalyl Acetate         | 20.00@ | 22.50 |
| Skatol, C. P. (oz.)      | 5.35@  | 6.00  |
| Styralyl Acetate         | 2.50@  | 3.00  |
| Styralyl Alcohol         | 9.25@  | 12.00 |
| Vanillin (clove oil)     | 2.60   | Nom'l |
| (guaiacol)               | 2.35   | Nom'l |
| Lignin                   | 2.35   | Nom'l |
| Vetivert Acetate         | 25.00  | Nom'l |
| Violet Ketone Alpha      | 18.00  | Nom'l |
| Beta                     | 15.00  | Nom'l |
| Methyl                   | 6.50   | Nom'l |
| Yara Yara (methyl ester) | 2.50   | Nom'l |

#### BEANS

|                      |       |      |
|----------------------|-------|------|
| Tonka Beans, Surinam | .70@  | .95  |
| Angostura            | 250@  | 3.00 |
| Vanilla Beans        |       |      |
| Mexican, whole       | 9.00@ | 9.50 |
| Mexican, cut         | 8.25@ | 8.50 |
| Bourbon, whole       | 8.25@ | 8.75 |
| South American       | 9.00@ | 9.50 |

#### SUNDRIES AND DRUGS


|                              |        |       |
|------------------------------|--------|-------|
| Acetone                      | .81/2@ | .09   |
| Almond meal                  | .25@   | .27   |
| Ambergris, ounce             | 17.00@ | 20.00 |
| Balsam, Copaiba              | .50@   | .54   |
| Peru                         | 1.30@  | 1.50  |
| Beeswax, bleached, pure      |        |       |
| U. S. P.                     | .57    | Nom'l |
| Yellow, refined              | .521/2 | Nom'l |
| Bismuth, sub-nitrate         | 1.20@  | 1.22  |
| Borax, crystals, carlot ton. | 55.50@ | 58.00 |
| Boric Acid, U. S. P., cwt.   | 6.95@  | 7.55  |
| Calamine                     | .18@   | .20   |

|                             |         |        |
|-----------------------------|---------|--------|
| Calcium, phosphate          | .08@    | .083/4 |
| Phosphate, tri-basic        | .09@    | .10    |
| Camphor, domestic           | .681/2@ | .831/2 |
| Castoreum                   | 13.00@  | 26.00  |
| Cetyl Alcohol               | 1.75    | Nom'l  |
| Pure                        | 2.25    | Nom'l  |
| Chalk, precip.              | .031/2@ | .061/2 |
| Cherry Laurel Water, carboy | 5.75@   | 6.25   |
| Citric Acid                 | .21     | Nom'l  |
| Civet, ounce                | 28.00@  | 49.00  |
| Clay, colloidal             | .07@    | .15    |
| Cocoa Butter, lump          | .251/2@ | .27    |
| Cyclohexanol (Hexalin)      | .30@    | .50    |
| Fuller's Earth, ton.        | 15.00@  | 33.00  |
| Glycerin, C. P., drums      | .181/4@ | .183/4 |
| Gum Arabic, white           | .42@    | .45    |
| Amber                       | .141/2@ | .151/2 |
| Gum Benzoin, Siam           | 5.00    | Nom'l  |
| Sumatra                     | .80@    | .85    |
| Gum Galbanum                | 1.80@   | 2.00   |
| Gum Myrrh                   | .55@    | .60    |
| Henna, pwd.                 | .30@    | .35    |
| Kaolin                      | .05@    | .07    |
| Labdanum                    | 3.25@   | 5.00   |
| Lanolin, hydrous            | .35@    | .36    |
| Anhydrous                   | .36@    | .37    |
| Magnesium, carbonate        | .09@    | .103/4 |
| Stearate                    | .24@    | .27    |
| Musk, ounce                 | 50.00   | Nom'l  |
| Olibanum, tears             | .25@    | .30    |
| Siftings                    | .11@    | .13    |
| Orange Flower Water, gal.   | 2.00@   | 2.50   |
| Orris Root, African, pwd.   | 1.05@   | 1.20   |
| Paraffin                    | .061/4@ | .09    |
| Peroxide                    | 1.10@   | 1.75   |
| Petrolatum, white           | .061/4  | .081/2 |
| Quince Seed                 | 1.75@   | 2.00   |
| Rice Starch                 | .09@    | .10    |
| Rose Leaves, red            | 5.75    | Nom'l  |
| Rose Water, gal.            | 6.50@   | 8.00   |

|                              |        |        |
|------------------------------|--------|--------|
| Rosin M. per cwt.            | 5.00@  |        |
| Salicylic Acid               | .35@   | .40    |
| Saponin                      | 2.00@  | 2.50   |
| Silicate, 40°, drums, works, |        |        |
| 100 pounds                   | .80@   | 1.20   |
| Soap, neutral, white         | .20@   | .25    |
| Sodium Carb.                 |        |        |
| 58% light, 100 pounds        | 1.35@  | 2.35   |
| Hydroxide, 76% solid, 100    |        |        |
| pounds                       | 2.60@  | 3.75   |
| Spermaceti                   | .26@   | .27    |
| Stearate Zinc                | .30@   | .31    |
| Styrax                       | 1.60@  | 1.75   |
| Tartaric Acid                | .64    | Nom'l  |
| Tragacanth, No. 1            | 4.25@  | 4.50   |
| Triethanolamine              | .341/2 | Nom'l  |
| Violet Flowers               | 1.75@  | 2.00   |
| Zinc Oxide, U. S. P. bbls.   | .101/2 | .103/4 |

#### OILS AND FATS

|                             |         |        |
|-----------------------------|---------|--------|
| Castor No. 1, tanks         | 13@     |        |
| Cocoonut, Manila Grade,     |         |        |
| c.i.f., tanks               | .0835@  |        |
| Corn, crude, Midwest, mill, |         |        |
| tanks                       | 123/4@  |        |
| Corn Oil, distilled, bbls.  | .151/2  | Nom'l  |
| Cotton, crude, Southeast,   |         |        |
| tanks                       | 123/4@  |        |
| Grease, white               | .083/4@ |        |
| Lard                        | .1380@  |        |
| Lard Oil, common, No. 1     |         |        |
| bbls.                       | .14@    |        |
| Palm, Niger, drums          | .0865@  |        |
| Peanut, refined, barrels    | .161/2  | Nom'l  |
| Red Oil, distilled, tanks   | .121/2@ |        |
| Stearic Acid                |         |        |
| Triple Pressed              | .185/8@ | .195/8 |
| Double Pressed              | .157/8@ | .167/8 |
| Tallow, acidless, barrels   | .141/4@ |        |
| Tallow, N. Y. C., extra     | .085/8@ |        |
| Whale oil, refined          | .1232@  |        |



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